DOCUMENT RESUME

ED 080 092 HE 004 508

AUTHOR Gage, Gerald
TITLE An Interpretive Analysis of Information on Instructional Accountability in Higher Education. Final Report.
INSTITUTION Oregon State System of Higher Education, Monmouth. Teaching Research Div.
SPONS AGENCY National Center for Educational Communication (DHEW/OE), Washington, D.C.
BUREAU NO BR-2-0300
PUB DATE May 73
GRANT OEG-0-72-3837
NOTE 57p.

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS Academic Achievement; *Administrator Education; *Educational Accountability; *Educational Research; *Higher Education; *Instructional Programs; Literature Reviews; Performance Criteria; Research Projects; Undergraduate Study

ABSTRACT

This paper is essentially an interpretive review of the literature on accountability as related to instructional programs in higher education. It is directed toward academic administrators, although others in higher education may find it useful. Accountability was treated as an essential set of transactions present in every relationship involving two or more individuals or agencies where: (1) there are expectations regarding performance, (2) those involved cannot remain in continuous proximity, and (3) at least one of those involved has the inclination and capability of influencing the behavior of one or more of the others. It was assumed that accountability is already functioning in all existing institutions and that it would probably be more congenial and productive if improvements could be made in those activities involving: (1) establishing and clarifying expectations, (2) obtaining and disseminating quality information, and (3) making adaptive responses. A review of current conditions regarding accountability in relation to undergraduate instruction would on the surface suggest that almost any change would be an improvement, proposed changes must be evaluated in terms of the threat posed to institutional autonomy and academic freedom. (Author)

ED 080092

HE

Final Report

Project No. 20300
Grant No. OEG-0-72-3837

Gerald Gage

Teaching Research Division
Oregon State System of Higher Education
Monmouth, Oregon 97361

AN INTERPRETIVE ANALYSIS OF INFORMATION ON INSTRUCTIONAL ACCOUNTABILITY IN HIGHER EDUCATION

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

U.S. Department of Health, Education, and Welfare
Office of Education
National Center for Educational Communication

HE 004 508

The project presented or reported herein was performed pursuant to a grant from the National Institute of Education. The opinions expressed herein, however, do not necessarily reflect the position or policy of the National Institute of Education, and no official endorsement by the National Institute of Education should be inferred.

FILMED FROM BEST AVAILABLE COPY

ABSTRACT

This paper is essentially an interpretive review of the literature on accountability as related to instructional programs in higher education. It is directed toward academic administrators, although others in higher education may find it useful.

There is confusion and disagreement about the concept of accountability demonstrated in the literature. Many persons perceive it to be a system of obligatory and punitive accounting to be imposed on colleges and universities by other agencies and on faculties by members of an administrative hierarchy. Some confuse it with other concepts, e.g., evaluation or accreditation. In higher education accountability has developed without thorough examination and without systematic effort to improve its viability.

Accountability was treated as an essential set of transactions present in every relationship involving two or more individuals or agencies where: (1) there are expectations regarding performance, (2) those involved cannot remain in continuous proximity, and (3) at least one of those involved has the inclination and capability of influencing the behavior of one or more of the others. It was assumed that accountability is already functioning in all existing institutions and that it would probably be more congenial and productive if improvements could be made in those activities involving: (1) establishing and clarifying expectations, (2) obtaining and disseminating quality information, and (3) making adaptive responses.

While a review of current conditions regarding accountability in relation to undergraduate instruction would on the surface suggest that almost any change would be an improvement, proposed changes must be evaluated in terms of the threat posed to institutional autonomy and faculty academic freedom. While academics traditionally have traded autonomy for other benefits, and while its value varies greatly from school to school and one geographic area to another, academic freedom is almost universally regarded by academics as the most highly valued of all educational goals. This suggests that any changes in accountability that can be shown to improve academic freedom should find a high degree of faculty support.

Final Report

Project No. 20300
Grant No. OEG-0-72-3837

AN INTERPRETIVE ANALYSIS OF INFORMATION ON INSTRUCTIONAL ACCOUNTABILITY IN HIGHER EDUCATION

Gerald Gage
Teaching Research Division
Oregon State System of Higher Education

May, 1973

PREFACE

This report addresses both applied and theoretical issues of instructional accountability in higher education.

There are two major sections to the report. The first section, "An Interpretive Analysis of Information on Instructional Accountability in Higher Education" is essentially a review of printed materials. Some of these have appeared in publicly distributed journals and books or were first presented as papers at professional meetings. Others were located in nationally known depositories of information or in state agencies whose major mission is related to higher education. Some were obtained from colleges and universities where related work was being conducted. A few were obtained from individuals personally interested in contributing to the study.

The principal criterion for screening materials for inclusion in this report was one of personal-professional judgment as to the probability that they would contribute something useful to an administrator engaged in planning change in instructional accountability within his/her own institution.

A second criterion for screening materials was that they should focus on instructional outputs, i.e., those variables most closely related to the delivery of instruction. While this criterion remained rather ambiguous, instruction was considered as a class of output variables different than those of service or research.

The literature proved to be scattered and largely unfocused on accountability. It became obvious early in the study that only recent materials need be explored. Even closely related concepts, such as responsibility and evaluation, did not appear extensively in educational literature as operationally applied concepts until after 1965, and accountability was not used as an ERIC Clearinghouse retrieval term until 1970. Very little literature was explored that appeared prior to 1965 and most inforamtion was taken from resources made available since 1969. Coupled with the paucity of earlier information is the large amount of information currently being generated. Every day new data surfaced that suggested changes in either the concept of accountability or procedures for its implementation.

The second section of the report is "A Bibliography on Instructional Accountability in Higher Education." While obviously selected, the listings are not limited to those appearing in the review section of the report. It is intended that the two sections can be treated as separate publications.

Thanks are due Lyman Glenney, Benjamin Lawrence, Charles Neidt, Casper Paulson, Jr., and Miles Romney for the critiques they made of various drafts of the paper. There is an obligation to those many persons who sent letters, notes, unpublished papers and assessment devices, and to all who replied to the questionnaires that were sent out. The efforts of Loring Carl and Dan Grimes in checking the accuracy of references, in preparing the bibliographies, and in locating references that were elusive are also appreciated. An award should be given Linda Chevraux who managed travel itineraries, typing production and printing. Special thanks are due Jan Walter, who identified, summarized, and aided in interpreting much of the material collected.

TABLE OF CONTENTS

Page

Introduction xi

Chapter I. Perceptions of Accountability 1

Definitions of Accountability 1

Models of Accountability 2

Tools of Accountability 4

A Paradigm for Examining Accountability 4

Chapter II. Improving Accountability 6

Establishing and Clarifying Expectations 6

Using Published Goal Statements to Identify and Prioritize What is Expected of a College 6

Clarifying Expectations Regarding Professors' Obligations to Instruction . . 7

Nature of Statements of Expectations 9

Tools for Determining Expectations 11
Survey Techniques 11
Delphi Procedures 12
Employment Contracts 13
Charters of Accountability 14
Collective Bargaining 14
Task Analysis Procedures 14

Obtaining and Disseminating Information 15

Providing Information for External Accountability 16

Providing Information for Internal Accountability 18
Procedures for Judging Teaching Effectiveness 19
Student Evaluation 20
Classroom Visitation 22
Other Methods of Assessment 23

Making Adaptive Responses 23

Chapter III. Improving Instructional Accountability 26

Indexed Reference List to Materials on Accountability in Higher Education 31

A Bibliography on Instructional Accountability in Higher Education 39

INTRODUCTION

Accountability in higher education has existed as long as higher education itself. Colleges and universities have been accountable for such obligations as providing services to other agencies of society, expanding the frontiers of knowledge, meeting standards established by accrediting agencies, training graduates to meet certain manpower needs, and for stewardship of resources appropriated by legislatures. Professors have been accountable for planning instruction, meeting classes, assigning educational activities to students, measuring performance, and awarding grades.

In very recent years accountability has apparently acquired either new meaning or different emphasis. In the literature of professional education, and in messages directed to the general public, the term is used as though it describes a new phenomenon. Accountability, as a word, is employed in so many contexts and as a descriptor for so many activities that, as Glass (1972) observes, "The term drips with excess meaning" (p. 636).

This report is an interpretive summary of the literature on accountability as it relates to **instruction** in American colleges and universities. It is addressed to a specific audience: academic adaministrators in colleges and universities offering four-year programs of undergraduate education. Its purposes are to:

(a) orient the audience to current thinking regarding accountability;

(b) contribute toward more effective discussion, discourse and debate regarding accountability;

(c) provide the audience with a guide to the literature of accountability;

(d) describe some feasible approaches to optimizing accountability

In the initial chapter of this report, the vocabulary employed in communicating about instructional accountability is discussed. After the current definitions, models and tools of accountability have been explored, a paradigm is presented through which instructional accountability in higher education can be examined. The review in the second chapter focuses on the identification and examination of barriers to improving accountability and on a discussion of ways in which those barriers might be broached. Implications of the paradigm for administrative practice are discussed in the final chapter.

The reader should note that this interpretive summary contains very little that is based on experimentation. As Hough (1970) points out, there is undoubtedly some relationship between failure to provide an acceptable understanding of what education has done and is doing and the fact that only .22 percent of the total budget for education has been spent on educational research. From an examination of the literature, it soon becomes apparent that the amount of institutional resources spent for improving either internal or external accountability must be negligible. The suggestions that are made throughout the report, and the approaches described in the final chapter, are based on the writer's interpretations of the observations, judgments, and opinions of informed and experienced individuals. Almost nothing in this report that can be construed to constitute a recommendation can be traced to the findings of experimental research.

CHAPTER I

PERCEPTIONS OF ACCOUNTABILITY

Definitions of Accountability

Accountability is employed in the literature in a variety of ways. The multiplicity of ways the term has been used has led Alkin (1972) to suggest that simple description of the term is not possible. When Glass (1972) describes accountability as another term in education that is permeated with "resounding vacuities" (p. 636), he seems to be implying that, unless some commonality of meaning can be ascribed to it, accountability will soon become a dysfunctional term in educatonal communication.

The Center for Instructional Research and Curriculum Evaluation (1971) states that "Full accountability depends on people agreeing about what the goals are and on people knowing the progress toward these goals" (n.p.). Barro (1970, p. 196) suggests that the basic idea conveyed by the concept "... is that school systems and schools, or more precisely, the professional educators who operate them, should be held responsible for educational outcomes–for what children learn." Wildavsky (1970, p. 213) says "To hold someone accountable is to assess how well he is performing." Stake (1972, p. 1) says:

> Accountability, in a strict sense, means to have good records and to make actions open-to-view. Strictly speaking, an accountable school is one that (1) discloses its activities, (2) makes good on staff promises, (3) assigns staff responsibility for each area of public concern, and (4) monitors its teaching and learning. Some spokesman extend the definition of the accountable school to (5) one that gathers evidence of making good on public expectations, (6) one that through research discovers the causes of strength and weakness, and (7) one that provides cost-effectiveness information on alternative programs. The extended definition is one that a school can strive to live by but one that – because of our inability to measure these things – no school can presently fulfill. The lesser definition is a realistic obligation.

To Alkin (1972, p. 2) "Accountability is a negotiated relationship in which the participants agree in advance to accept specified rewards and costs on the basis of evaluation findings as to the attainment of specified ends." This perception of accountability as part of an economic agreement or exchange of information, as in an act of commerce, seems to fit the model suggested by Glass (1972), "The simple economic relationship of vendor and buyer is the proper paradigm for analyzing educational accountability. An accountable relationship between seller and buyer involves three elements: (1) **disclosure** concerning the product or service being sold, (2) product or performance **testing**, (3) **redress** in the event of false disclosure or poor performance" (p. 636).

At least four writers perceive accountability primarily as a management concept. Lieberman (1970, p. 194) writes that, "At a common sense level, there is accountability when resources and efforts are related to results in ways that are useful for policy making, resource allocation, or compensation." Lopez (1970, p. 231) takes the position that,

> Accountability refers to the process of expecting each member of an organization to answer to someone for doing specific things according to specific plans and against certain timetables to accomplish tangible performance results. It assumes that everyone who joins an organization does so presumably to help in the achievement of its purposes; it assumes that individual behavior which contributes to these purposes is functional and that which does not is dysfunctional. Accountability is intended, therefore, to insure that the behavior of every member of an organization is largely functional.

Hyer (1971, p. 4) describes accountability as "... a management concept or policy. It involves agreeing upon objectives, deciding upon the input to achieve the objectives, and measuring the output to see the degree to which the objectives have been reached. In even simpler terms, we must decide what we are going to do, do it, and then prove we have done it–and perhaps how well we have done it." Roueche, et al. (1971), have a two-part management oriented definition that suggests accounting both external and internal to the institution, "... an obligation of the college to answer to its constituency for carrying out delegated responsibilities; the obligation of members of the college to produce and account for results, in terms of objectives or assignments which have been delegated" (p. 23).

Lessinger (1970a), who is credited with stimulating the current interest of educators in accountability, ascribes a

variety of meanings to the concept depending on the immediate answer to the question, "... who is accountable to whom?" (pp. 107-117). Perhaps his clearest statement regarding the term is:

> Accountability is the product of a process. At its most basic level, it means that an agent, public or private, entering into a contractual agreement to perform a service will be held answerable for performing according to agreed upon terms, within an established time period, and with a stipulated use of resources and performance standards. This definition of accountability requires that the parties to the contract keep clear and complete records and that this information be available for outside review. It also suggests penalties and rewards; accountability without redress or incentive is mere rhetoric" (1970b, p. 217).

Neff, Rands, and Lopez perceive the concept **responsibility** as closely linked to that of accountability but attempt to make a useful distinction between them. Neff (1969, p. 14) proposes:

> ... that 'responsibility' be used to refer only to the voluntary assumption of an obligation, while 'accountability' be used to refer to the legal liability assigned to the performance or nonperformance of certain acts or duties.

Rands (1971, p. 1) indicates:

> There are at least two kinds of accountability. There is that which is akin to a sense of responsibility and derives from an internal desire or commitment. This kind of accountability is impervious to outside persuasion and pressure. Indeed, it makes such external persuasion totally irrelevant and unnecessary. The other kind of accountability is that which is akin to expectations and derives from an external demand. This kind of accountability is set by others and is based on their expectations. This kind of accountability depends on external pressure and persuasion to make it functional.

Lopez (1970, p. 231) says, "Accountability is to be distinguished from responsibility by the fact that the latter is an essential component of authority which cannot be delegated."

Mortimer (1972), focusing on higher education, has attempted to analyze a variety of interpretations of the accountability concept. He perceives confusion about accountability in higher education as developing from three areas of concern: managerial accountability, accountability vs. evaluation, and accountability vs. responsibility. His interpretation contributes to understanding the first and last of these concerns, but obfuscates the distinction between evaluation and accountability by failing to explicate sufficiently the concept of evaluation. Since each concept is the object of a variety of perceptions and misperceptions, the task of providing perspicuity was a formidable one.

Mortimer does make a useful distinction between **external** accountability and **internal** accountability. In his view, external accountability involves accounting to society and its institutions: the executive branch of government, state legislators, and courts and law enforcement agencies. Internal accounting is concerned with issues of control, authority, management, governance, goal setting, information processing, and evaluation.

Models of Accountability

Current emphasis in the literature seems to suggest that both internal and external instructional accountability should focus on outputs although the Carnegie Commission Report (April, 1971), written during the peak of concern about accountability in higher education, only identified a single obligation to be imposed by public agencies upon colleges and universities that could be considered an outcome related to student attributes: institutions are to develop programs responsive to certain manpower needs (e.g., medicine).

Alkin (1972) suggests that it is oversimplistic to insist on the unidimensional view that personnel in educational institutions are accountable or they are not. He perceives that different people may have different primary obligations and that they perform these obligations to different degrees of proficiency. Glass (1972) suggests that accountability should take place in at least five areas: (1) curriculum, (2) student growth and well being, (3) personnel, (4) finances, and (5) legality. Dyer (1970) advises attending to four groups of variables: (1) input, (2) output, (3) surrounding conditions, and (4) educational processes.

Almost all model builders indicate that instructional accounting must be concerned with the extent that students are **changed** during their exposure to certain educational contexts. If a production model of education is employed (Figure 1, Brown, 1970, p. 37), then input may be perceived as entering students, plus whatever attributes they possess, and output is perceived as the same students, plus whatever attributes they possess, at the time they exit from a program. The model is appropriate in considering time spent in a particular course or in the entire educational program of an institution. Obviously it is extremely difficult to determine the

extent of change contributed by any particular element of the environment during a student's sojourn in college. Thus it is difficult to specify what is expected of a given professor and impossible to determine who or what led to the success or failure of a given student or class. Obligations cannot be affixed, nor outputs attributed.

Input: Value of "Goods in Process" when received by higher education	**Environment**: The Production Process	**Output**: Value of "Goods in Process" when shipped out by higher education

Input passes through the environment to become output. The objective of higher education is to add value to the input (students), as it passes through the environment (college).

Figure 1. The Simple Model

Both Brown (1970) and Dyer (1970) have posited the development of indices that would reflect the extent an educational program has produced change in students. In a very rough way these indices may be compared to such economic concepts as the Consumer Price Index.

Economic models, from which the input-process-output model was derived, are usually concerned with whether the **value added** to inputs (the net value of output equals the gross value of output minus the gross value of input, Brown, (1970), is worth the cost of the environment (production process) to obtain it. Such decisions require value judgments about the worth of each output goal and indicator of it. These values will vary from person to person and group to group and may change over time. The Delphi techniques described later in this paper, and surveying with instruments such as developed by Peterson (1973) and Gross (1971), seem to offer the best possibilities for processing value judgments, although see a position paper by Gage (1970a), and an instrument by Downey, et al. (1958).

Educational economists are also concerned with problems of effectiveness (outputs obtained for a certain expenditure of resources) and with efficiency (relative cost of obtaining certain outputs).

In his model for educational management, Kaufman (1971) presents the position that the primary task of all educators is the management of learning. He argues that the educational process can be managed in such a manner that data needs for internal decision making and information for disclosures are generated as systematically as possible with a "proper perspective for values and valuing" (p. 21). To Kaufman those who manage learning in a systematic way have an integrated system for improving evaluation and for answering demands for accountability.

> The learning management job could be conceived as being the planning, organizing, designing, implementing and evaluating of learning situations and outcomes, and making required continuing revisions to assure ongoing relevancy and practicality. It is an accountability process. (p. 21)

This perception is not necessarily shared by college and university professors, only a small percentage of whom have any training in teaching or "learning management."

The six steps of Kaufman's educational process model are shown in Figure 2. Five of the steps are shown within the boxes. The sixth step is represented by the broken line. Nine of the tools currently used are shown in the Figure "... as providing rational and realistic ways of improving the educational product" (p. 23).

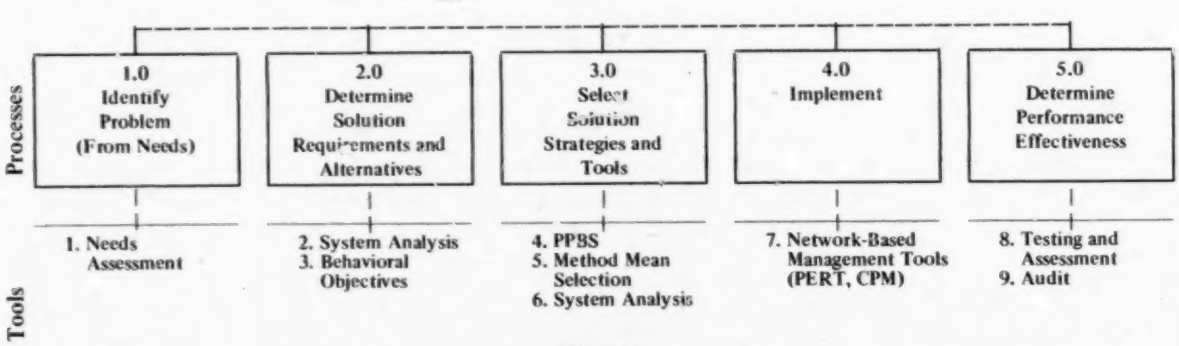

Figure 2

Taken from Kaufman's Educational Management Model

Tools of Accountability

Glass (1972) and Hyer (1971) point out that there are many systems labeled "accountability" that might be better considered as tools or aids in accountability rather than as models. They are usually effective in examining or contributing to one or more of the basic elements of accountability, but fail to account adequately for all or a sufficient number othem. Occasionally educators attempt to employ them as substitutes for accountability. Kaufman (1971) and Hyer (1971) are explicit that these have utility in their own right, but are best perceived as tools that make accounting and evaluating possible.[1]

1. Input – Output Analysis
2. Accreditation
3. Planning, Programming, Budgeting Systems (PPBS)
4. Measurable Performance Objectives (MPO) or Behavioral Statements of Instructional Objectives
5. Education Vouchers
6. Performance Contracts
7. Needs Assessment
8. Program Evaluation Review Technique (PERT) and Critical Path Method (CPM)
9. Systems Analysis
10. Certification
11. Methods –Means Selection Techniques
12. Turnkey Arrangements
13. Achievement Testing, particularly if Criterion Referenced and including National Assessment
14. Independent Education Accomplishment Audit (IEAA)
15. Management Support Groups
16. Performance Incentives or Merit Pay
17. Effectiveness Indices or Instructional Cost Indices
18. Instructional Engineering
19. Charters of Accountability
20. Competency Based Training
21. Management By Objectives (MBO)
22. Information Management Systems and Management Information Systems (may be computerized)
23. Faculty Activity Analysis

Not all of these tools will be perceived as useful in college instructional accounting, but most of them have been used in some form at some time in some institution of higher educaton. In a sense even education vouchers have been employed, e.g., veteran's education legislation has permitted ex-military persons to enter the schools where they can gain admittance and to either pay tuition from an allotment or through direct government payment.

[1] Most of these tools are discussed to some extent in one of the following sources: (1) *Phi Delta Kappan*, 1970, 52(4); (2) *Educational Technology*, January, 1971, 11(1); (3) *Audiovisual Instruction*, 1971, 16(5).

As with the weather, so it seems to be with accountability; everyone talks about it, but no one does anything about it. The term is used to define an activity, a process, a moral condition, a relationship and a management tool. Therefore, it seems presumptuous to attempt to order the chaos. Rather than attempt another definition, in this report accountability will be described in terms of just those components that seem to require attention if it is to be improved.

A Paradigm for Examining Accountability

To fulfill the major purposes of this report it was necessary to accommodate to two conditions regarding the literature on accountability: (1) the plethora of definitions and the general confusion regarding the meaning of accountability, (2) the paucity of experimental data leading to clarification of the concept or to descriptions of feasible procedures for improving it, particularly at the college and the university levels. This has been accomplished by developing a **description** of accountability that both contributes to the major purposes and serves as the framework for organizing the remainder of the report.

In this report accountability will be treated as an essential condition, a set of transactions, associated with every relationship involving two or more individuals or agencies where:

1. there are expectations regarding performance,
2. there is spatial or temporal separation or discontinuous contacts of those involved,
3. at least one of the individuals or agencies has the inclination and capability of influencing either or both the expectations and performance of one or more of the others.

These circumstances describe a relationship in which the transactions are contractual or obligatory in nature. The expectations may be implied or tangible; ambiguous or articulate; negotiated, arbitrated, or imposed. The separation of the participants requires a special means of communication, an accounting. An account is characterized by its content, which is focused on information regarding expectations and performance. This information will vary in its concreteness, objectivity, validity, adequacy, purity, and usefulness. Individuals and agencies will vary in their abilities to identify, collect, process, distribute, interpret, judge, and apply information. They will also fluctuate in their inclination and capability to influence others. In a viable contractual relationship, attempts to influence others should be seen as a

consequence of the accounts provided. Consequences may or may not be functional, punitive, adaptive, reinforcing, etc. These consequences themselves become part of the history of the relationship and influence new expectations; the extent, type, and exchange of information; the reliance on information; and subsequent consequences.

When viewed in this light, accountability is the transactional *sine qua non* of a contractual relationship. It cannot be introduced "after-the-fact." It can be demonstrated and maintained. It can be improved. It can be ignored only at the risk of creating a relationship in which actions are crisis oriented. Frequent crisis responses over time tend to weaken the relationship and create conditions for failure.

It was assumed that, for better or worse, accountability is already functioning in all existing colleges and universities and that it would probably be more productive if improvements could be made in those activities related to the basic characteristics of the relationship in which accounting is necessary. That is, improvement is needed in:

1. **Establishing and Clarifying Expectations.** Throughout the literature there are discussions relative to obligations, duties, responsibilities, strategies, transactions, intentions, products, inputs and outputs. It is obvious that theoretically and practically there is very little agreement as to what people within institutions of higher education expect of each other, or what agreements have been reached between colleges and other social agencies. While little is known about what various people expect, less is known about the validity of those expectations. Included here is uncertainty about what constitutes a justifiable request for accounting.

2. **Obtaining and Disseminating Quality Information.** While decision theory would suggest that information should reduce uncertainty in decision making, this principle does not seem obvious in colleges and universities. The very term accountability suggests some form of information exchange, an accounting. But the basic question of accountability still remains the key to improving the relationship; "Who expects whom to do what?" The answer, or answers, require(s) some attention to be paid to content, quality and timeliness of information, and procedures for its exchange. Instructional accountability in higher education will require that information be obtained through "acceptable" procedures of **assessment.**

3. **Making Adaptive Responses.** In theory at least, information should lead to: (1) clarification, maintenance, change, or termination of the relationship of the agents or agencies involved; (2) one or all of the parties involved changing their respective expectations or operations; and (3) some difference in output from either the individuals, the agencies, or the institution. That is, the final consequences of accountability should be clarification, restitution, compensation, reward, correction, redress, modification, or retribution.

Each of these elements is suggested as requiring attention if accountability is to be viable.

CHAPTER II

IMPROVING ACCOUNTABILITY

It is proposed that accountability would probably be more productive if improvements could be made in: (1) establishing and clarifying expectations, (2) obtaining and disseminating quality information, and (3) making adaptive responses. In this chapter each of these elements is examined in terms of: (1) barriers within it that may inhibit viable accountability and (2) feasible approaches to alleviating those barriers.

Establishing and Clarifying Expectations

It is difficult to establish expectations for either colleges or individual professors because of the plurality and heterogenity of the people involved. Expectations for a college are usually expressed as statements of goals or objectives. Brandl says, "Higher education is many things to many people; it is impossible to compile a self-consistent, yet complete list of the goals of a university." (1970, p. 85) Tollett's (1970) report also implies that universities just may be trying to achieve incompatible goals. Yet Hind (1971) thinks both individual and group goals can be accommodated, although they must be in harmony.

It is difficult to determine the extent or type of goal discrepancies because what is reported or what can be observed is not always accurate. There is a position expressed that the university should actually encourage diversity of goals, e.g., Brandl (1970) says, "a university is designed not for **reconciling** conflicts, but for **permitting** them . . . there is no agreement on its product . . . " (p. 87). The study by Gross (1971) would suggest that there is less disagreement among staff members and schools about institutional goals than there is difference in emphasis placed on them. This opinion is supported by Brown (1970).

All values should not be incorporated into the goals of a college. However, the opinions of a variety of constituencies must be considered if external accountability is to be improved. Lack of such information reduces the ability of the college to act responsibly, either in its own self interest or that of society.

Peterson (1973) found the local citizenry of California to be out of sympathy with what they perceived some campuses to be doing, particularly in terms of those process goals seen by most academics as requisite for a viable institution, e.g., freedom. However, he suggested that, "Lay people . . . can understand and **will** accept institutional goals if campus officials will make the effort to communicate" (p. 173). He recommended that:

> . . . the public at large **deserves** to be informed about performance . . . If done openly and imaginatively, such rendering of account could lead beyond understanding and confidence on the part of the public to their active support for many of the objectives and ideals the state's colleges and universities may wish to work toward in the years ahead (p. 173).

Using Published Goal Statements to Identify and Prioritize What is Expected of a College

Institutional goals may be used on a campus to: (1) serve as a basis for policy, (2) act as general decision guides, (3) aid in planning, (4) help establish a management information system, (5) guide institutional evaluation, and (6) implement accountability (Peterson, 1971). The list is not exhaustive. Institutional goal statements may give some valid indications of the hopes, aspirations, and philosophies of those who framed them. However, it is rare that these statements are so phrased that the extent of their attainment could be reliably assessed.

Rather than investing faculty resources in developing a statement of goals, it may be more feasible to take some existing statements of goals, add some statements if they seem needed, and engage faculty's efforts in prioritizing them. Similar procedures, employed by both Gross (1971) and Peterson (1973), required respondents to indicate both how they saw a prestated goal as being achieved, and the extent they would like it to be achieved. The results therefore provided an indication both of goal achievement and of discrepancies that might suggest needs requiring some attention and commitment of resources. The WICHE (Lawrence, et al., 1970, p. 112-113) seminar on the outputs of higher education resulted in a list of variables ("for review purposes only") considered to be outputs of higher education and that, therefore, can be treated as goals. A source for measuring each output was also identified.

These three statements of educational goals have a commonality that holds particular relevance to accountability. All statements include both the consequences, the results of

activities and conditions, and the activities or conditions themselves. Gross classified his forty-seven goal statements as: (1) output goals, (2) adaptation goals, (3) management goals, (4) motivation goals, and (5) positional goals. Peterson separated his ninety goal statements into two categories: (1) outcome goals, and (2) process goals. WICHE ended up with forty-nine variables under the headings: (1) instructional outputs, (2) institutional environment outputs, (3) research outputs, and (4) public service outputs. While some persons may view accountability as focusing on end results, the expectations for some individuals or agencies, and some expectations regarding the instituion itself, obviously include the acts and circumstances that help achieve those results. It appears those concerned about accountability in higher education have accepted the reality of obligations related to both means and ends.

In the same WICHE Conference, Brown (1970) also cited twenty broad goals of higher education and listed forty suggested measures for assessing them. While these measures are rather gross, Brown suggests that, "The realistic choice is between "no measures" (subjective judgments) and "imperfect proxies" (p. 29). By providing alternative measures for each consensus goal, he enables the user to employ measures for which the user has or can obtain data that are acceptable or agreeable to him. Furthermore he advocates that if the best measure isn't possible, the next best should be resorted to. Unfortunately, institutions sometimes settle for proxies that are so remote from what could be considered "best" that information generated from their use is almost worthless. The *Higher Education Measurement and Evaluation Kit*, prepared by the staff of the Higher Education Evaluation Program (1972) may be the most complete and systematically developed set of instruments for assessing colleges and universities. The **Kit** contains measures of: (1) student development, progress, and attainment; (2) educational processes and contexts, (3) the student body, and (4) teacher/course evaluation.

The chief administrator at a college or university should assume the initiative for seeing that reasonable expectations for the institution are defined. The Carnegie Commission Report (April, 1971) provides guidelines establishing "appropriate limits of influence and control" (p. 105) of public agencies over colleges and universities. Such guidelines may be useful in deciding what types of responses should be made to some requests for information, but the recommendations themselves generally suggest returning to a relationship between colleges and universities and other agencies of society that is not currently, and may never have been, realistic except for the very largest state institutions. Failure by the executive administrators of a college or university to establish procedures for explicating those things the institution can be expected to do implies that they will be established by default. When institutions or individuals do not disclose their instructional intents, they will have to be inferred. Such inferences may be less systematic and less qualified than if the college administration had assumed the initiative. Both institutional autonomy and faculty freedom are threatened by the president who leaves the institution at the mercy of the subjective and unsystematic attacks of those within and external to the college or university who have no basis but their own inferences upon which to make judgments about what the college can be expected to do. State coordinating and budgeting agencies sometimes are better prepared than the college or university agents to make such judgments since they may have a broader basis for comparison. Glenny (1970) perceives some type of coordinating agency as essential to statewide planning in higher education. One reason is that coordinating agency personnel usually have more credibility with legislators who must appropriate funds than do representatives from individual institutions. Some college administrators have deliberately established programs of disclosure and have found their credibility to increase – to the benefit of their institutions.

Clarifying Expectations Regarding Professors' Obligations to Instruction

In some ways it seems easier to clarify what is expected of an institution than what is expected of its staff. Perhaps this is because there is a detachment about obligating an organization to do something. If an organization fails to meet the expectations of its clients and patrons the consequences seem more impersonal for everyone involved. Instructional accountability within a college is extremely personal. At the molecular level it focuses on the expectations others have of individual professors. While it is probably the students who have been most instrumental in bringing about the pressure for instructional accountability (Trent and Cohen, 1973), the expectations concerning teaching behaviors still are largely established by professors (Hind, 1971; Gross, 1971). The impetus for getting adaptive faculty response to student demands or to pressure from other individuals or agencies will probably have to derive from the administrative structure. As Hind (1971) comments, "Everyone wants change and waits for someone else to do something" (p. 286).

Expectations between/among agents or agencies within a single institution establish the framework for internal accountability. Some of these are expressed overtly in faculty codes and handbooks published at the institution of employment. Many expectations can be inferred as part of traditional activities accompanying a particular title or position, a kind of assumed and unwritten job description. This suggests that assuming responsibility for an assignment may result in obligations about which one was not aware.

Some of these are very convert and unique to a particular institutional context.

Both institutions and their professors value the freedom to voluntarily assume responsibilities rather than having obligations imposed on them by others. However, the impression is given that professors perceive the system within higher education as functioning adequately in the best interests of their clients and patrons and that issues of instructional accountability are to be restricted to those very few instances involving legal obligations. The use of negotiators and negotiations as a means of developing conditions for appointment or contract is itself testimonial to support the assumption that there is not sufficient consensus regarding what professors are expected to do.

The literature (Mortimer, 1972; Rands, 1971) suggests that, as it is currently perceived, instructional accountability has negative connotations to college faculties. This seems a natural consequence of the way the relationship is usually made visible. In most institutions only a naive professor would fail to understand whether or not publications were used as a criterion for promotion. The professor is at least roughly aware of what is expected in the way of standards, e.g., an article must be printed in a refereed journal; knows what information must be provided and who it must be provided to, e.g., send a copy of the notification of acceptance to the department chairman; and rather realistically expects certain consequences, e.g., an adjustment will be made in salary or rank.

Contrast this with the visibility of what constitutes a favorable relationship in relation to instructional accountability. Frequently it is only if or when a professor is threatened with dismissal because of teaching incompetence that it becomes evident to the individual or his peers that: (1) there is almost no explicit agreement as to his legal, constitutional or professional obligations regarding instruction; (2) whatever information is available regarding his teaching performance was unsystematically obtained; (3) there is relative and fluctuating emphasis placed on instructional performance as a criterion for making judgments about employment; (4) there had been no systematic effort to establish better accountability throughout the institution prior to the time of the current crisis; and (5) accountability is not sufficiently valued that an effort is maintained to improve it beyond the duration of the immediate emergency.

To the extent that this is descriptive of what occurs in colleges and universities, it seems reasonable to conclude that attempting to improve accountability is a justifiable endeavor in spite of faculty apathy.

It should perhaps be noted that the more task areas in which there are expectations, the less is the probability that instructional performance, or any other single task, will be emphasized. Overall, professors are apt to be evaluated principally on research and service although Eble (1971) describes teaching as "the principal activity of most professors" (p. 4). Eble goes on to suggest that if teaching was just accepted as important, most of the vagueness surrounding obligations related to it would lessen. Hind (1971) reports that professors think teaching should play a more important role in determining university rewards, but they also know that it doesn't, and they go along with the existing reward system. There are few obligations related to teaching; little is expected. Hacquart (1967), in a review of methods of recruitment in selected universities throughout the world, concluded that they pay almost no attention to teaching ability and that it is really not a factor in faculty selection.

Stake (1971), is adamant that "the evaluation of college teaching is an inseparable part of the evaluation of the college itself" and implies that evaluation is an integral component of accountability, e.g., "it provides data for the reward of merit and for the correction of shortcoming" (p. 1). He perceives that teaching can be judged properly only if examined in the light of "institutional goals, school environments, administrative organization and operations, curricular content, student achievement, and of the impact of the program on various sectors of society" (p. 1).

Here are some of the "responsibilities" he cites that are applicable to, and help define the roles of various people in evaluating and, perhaps, accounting:

Administrative officers should (pp. 1-2):

1. ". . . interpret the wishes of patrons and the needs of clients and translate . . . into institutional goals"
2. ". . . set the institutional goals, the long-range goals"
3. maintain ". . . a meritorious level of teaching . . ."
4. ". . . collect evidence of merit--and lack of it . . ."
5. ". . . encourage each faculty member to submit whatever evidence of merit he can"
6. ". . . subject whatever plans and descriptions of teaching are provided by a faculty member to the scrutiny of experts in his field and in the field of pedagogy"

Faculty members should (pp. 1-3):

1. ". . . set intermediate goals"
2. ". . . set the instructional strategies and tactics"
3. ". . . accept responsibility for contributing to the accumulation of evidence of the effectiveness of that teaching, that is, the teaching for which he/she accepts responsibility. Such evidence may be both/either logical or empirical"
4. provide ". . . statements of purpose and rationale of instruction." Such statements may be formal or informal.
5. discharge ". . . responsibilities he has fashioned for himself out of the general assignment given him. . . ."
6. continuously improve ". . . his own methods of instruction"
7. provide ". . . the criteria for the evaluation of his teaching"

Executive officers and committees should (p. 3):

1. ". . . evaluate the quality of teaching of each faculty member"
2. make recommendations for rank and pay
3. encourage and facilitate improvement of instruction by teachers

The "institution" should provide "for voluntary and perhaps confidential use" (pp. 3-4):

1. "check lists of classroom, laboratory, and field conditions which have been demonstrated to promote learning."
2. "course-content reviews . . ."
3. "observational and remediation services by specialists . . ."
4. "student opinion-polling services . . ."

It should be recognized that Stake's comments are part of a position paper, not a published document, but they deserve consideration. First of all, much of the importance of Stake's paper is his obvious conviction that the evaluation of college instruction must be conducted in such a manner as to preserve or even enhance academic freedom.

> The integrity of a college program is maintained only when each faculty member perceives himself--within a certain division of labor--to be free to pursue institutional goals as he sees fit. Officers or committees charged with evaluative responsibility will not infringe on academic freedom with the presumption that there is but one proper way of teaching or that there is but one set of educatonal objectives, even for a single lesson. They may make known to the faculty member certain perceptions and valuations of his past contributions and certain hopes for the future, but the final choice of intermediate goals and means of instruction will be his. (p. 2)

> Because academic freedom is essential and requires restraint by administrative officers, the means available to such officers for redirecting the instructional program are limited. Reallocation of rank and pay to present faculty members will not be used for such purposes nor will allocation of increases in rank and pay. The officers of the institution will modify the direction of a program through logical persuasion, by reallocation of other resources and enrollments, by reassignment of responsibility, and by employment of additional faculty members. (p. 3)

Secondly, the list of "responsibilities" and other implications in the paper suggest that the individual faculty member is obligated to provide evidence about his/her own instruction (accounting) upon assuming instructional responsibilities. It is not clear just what adaptations are to be made if this obligation is performed unsatisfactorily. Evidence is needed as to whether faculty currently accept this as a legitimate expectation of instruction and the extent of and procedures for fulfillment.

Nature of Statements of Expectations

As part of this study an attempt was made to secure statements of expectations regarding instruction from all colleges and universities listed by the U.S. Office of Education. The response was very meager. Forty-seven respondents supplied documents containing statements related to instructional expectancies. Most of these were in the form of faculty handbooks and their content was extremely similar:

1. There was usually some indication of a line of authority, a statement that defined who was responsible to whom, e.g., the Dean of Instruction will report directly to the President.

2. Job responsibilities were usually more explicitly stated for administrative and support personnel than for the teaching faculty.

3. Expectations related to research services were more explicit than those concerned with instruction and were frequently stated in terms of expected products, e.g., papers read or publications.

4. Instructional responsibilities were generally stated in terms of activities or functions to be conducted rather than in terms of effects to be achieved. In fact, in only one of the documents reviewed was an obligation stated in terms of influences instructors were to have on student attributes.

5. There was usually an A.A.U.P. based statement regarding academic freedom. In many documents this was followed by some disclaimer reflecting various degrees of political and social acceptance and/or tolerance of deviations in the community.

Personal acquaintances **report**, however, that many institutions have developed rather clear statements of instructional expectations. Impetus for this development apparently came from state legislators who were in turn responding to pressures created by student demonstrations during the 1960s. They also report that they are not aware that these documents have resulted in any extensive modifications of instructional accountability. That is, faculty members are not thought to be employing them as guides to their own activities nor is anyone systematically obtaining data regarding professors' adherance to the expectations stipulated.

One example of a clear statement of instructional expectations is that of Michigan State University (Office of the Educational Development Program, 1971). It was developed through the usual procedures of governance in higher education, that is, by subcommittees and committees. Note that none of the "responsibilities" cited indicate that an instructor is responsible for outputs in terms of student attributes.

Faculty Code of Teaching Responsibility:

> The teaching responsibilities of the instructional staff are among those many areas of university life which have for generations been a part of the unwritten code of 'scholars and gentlemen.' Now, however, along with other formerly unwritten contracts, it seems appropriate to set forth these responsibilities in the form of a code. The provisions of such a code are so reasonable to learned and humane men that it may appear redundant or unnecessary to state them. However, the University conceives them to be so important that the performance of the instructional staff in meeting the provisions of this code shall be taken into consideration in determining salary increases, tenure, and promotion.
>
> 1. Instructional staff members are responsible for stating clearly the instructional objectives of each course they teach at the beginning of each term. It is expected that each instructional staff member will direct his instruction toward the fulfillment of these objectives. Instructional staff members are responsible to orient the content of the courses they are assigned to teach to the course descriptions approved by the University Curricula Committee and the Academic Council.
>
> 2. Instructional staff members are responsible for informing students in their classes of the methods to be employed in determining the final course grade and of any special requirements of attendance which differ from the attendance policy of the University.
>
> 3. It is expected that graded examinations and papers will be provided to the student for inspection and discussion. Thus, final examinations will be retained for one term to provide the opportunity for review with the instructor, if the student so desires. It is expected that examinations will be graded within a sufficiently appropriate time to make the examination a part of the student's learning experience.
>
> 4. All instructional staff members are expected to meet their classes regularly and at scheduled times. In case of illness or any other emergency, the instructor will notify the department chairman so that appropriate action may be taken.
>
> 5. All instructional staff members whose responsibilities involve students are expected to schedule a reasonable number of office hours for student conferences. Office hours should be scheduled at times convenient to both students and instructors with the additional option of prearranged appointments for students when there is a schedule conflict. The number of office hours is to be determined at the appropriate administrative level, and office hours should be a matter of common knowledge.

6. Instructional staff members who are responsible for academic advising are expected to be in their office at specified hours during the period of each enrollment. Arrangements will also be made for advising during registration. (pp. 59-60)

Michigan State University is one of the institutions that has tried to improve instructional accountability. It has systematically expended resources to help its faculty meet their instructional obligations, both by employing discretionary funds to develop an Office of Educational Development, and by breaking the undergraduate program into some small colleges. These efforts have not discouraged the legislature of Michigan from passing a statute, commonly referred to as the "contact hour law" stipulating the hours per week a professor is to be engaged in activities directly related to instruction.

Tools for Determining Expectations

A number of procedures have been developed for helping clarify what is expected of an institution of higher education, and of the members of its staff. These procedures may be viewed as special accountability tools.

Survey techniques. In spite of a long history of use in many areas, survey techniques have not been extensively used until rather recently in obtaining information relative to institutional expectancies, that is, in the goals of colleges and universities and the extent they have been or are being achieved. They still are not used extensively in establishing internal expectations. In 1971 Gross reported a study that demonstrates the usefulness of using goals in describing universities. Both the procedures employed and the results have implications to understanding accountability. Briefly:

1. From an extensive literature search Gross developed a list of goal statements.

2. These goal statements were pretested with administrators and faculty at a single university. Instructions were for faculty to report on what they saw at their university. Perceptions were asked for, not opinions. From this pretesting, forty-seven goal statements were selected, whose standard deviation on a 6-point scale was 1 or less.

3. All of the administrators and 10 per cent of the faculty at 68 institutions classified as universities were surveyed with an instrument containing these goal statements plus other questions (three hundred in all, requiring one and one half hours to fill out). Instructions were for the respondents to indicate "how important **is** each aim at this university?" and "How important **should** the aim be at this university?" (p. 25)

4. Approximatley 51 per cent of the administrators and 40 per cent of the faculty returned the instruments.

5. Tests of sample bias did not reveal any bias in the dimensions in which the researcher was interested.

Of interest to this review on accountability are these results:

1. For college personnel, the most important goal, both perceived and desired, was to "protect the faculty's right to academic freedom" (p. 32).

2. In the main, the impression was given that university personnel thought that not much attention was paid to students--or should be. That is, goals directly related to students were not highly rated (pp. 38-39).

3. The most **neglected** goal, one that respondents thought **should** have been considered important but was not, was to "make sure that salaries, teaching assignments, and prerequisites always reflect the contribution that the person involved is making to the functioning of the university" (pp. 37-38).

4. Two aims that were perceived as receiving more emphasis than they deserved were: "insure the favorable appraisal of those who validate the quality of the programs we offer," and "insure the continued confidence and support of those who contribute substantially to the finances and other material resource needs of the university" (p. 38).

5. Administration and faculty generally agreed on institutional goals.

6. The more the faculty of a particular school was perceived as having influential power to affect goals, the more that university was perceived as emphasizing that students should develop their intellect and objectivity about themselves (p. 51).

7. In institutions where the legislature or state government was seen as having the power to influence goals, the aims described in No. 6 were actually perceived as deemphasized.

Generalizations from a single study are hazardous, but the implications of these results should not be overlooked. At the time of that study it could be inferred from the results that within the institutions surveyed:

1. College personnel had not attended to goals that related to student attributes (Result No. 2), and had not viewed it important to be concerned about external accounting, neither to their own accrediting agencies nor to their patrons (Result No. 4).

2. College personnel were not concerned about internal accountability and thought adaptations should be based on valid evidence (Result No.3).

3. College personnel placed more emphasis on maintaining their academic freedom (perhaps also institutional autonomy) than any other outcome (Results No. 1, No. 6, No. 7).

4. Faculty and administration presented a united front on goals (Result No. 5).

5. College personnel thought their patrons and benefactors had different aims for the university than they (Result No. 7), and made no attempts at accommodation (Result No. 4).

It is the lack of real evidence as to how various groups perceive institutional aims that suggests the necessity for a survey similar to the one designed by Gross in every college concerned with external, and to some extent, internal accountability.

Peterson (1973) recently completed a survey in California of 23,820 students, faculty, administrators, presidents-chancellors, governing board members and community people. Background to the instrumentation used, the *Institutional Goals Inventory* (IGI), Institutional Research Program for Higher Education, ETS, 1972) is reported elsewhere by Peterson (1971). As in the Gross (1971) survey, support or process goals as well as outcome goals were included in the instrumentation. Peterson also requested respondents to estimate both how important each goal was and how important it should be. The IGI provides opportunity for adding additional goal statements or background questions to the regular format.

Peterson reports more wide disagreement on the individual campuses and between campuses in California than was shown by Gross, whose respondents were all from universities. People in the communities near the institutions tended to rate "accountability/efficiency" at about the same level of desirability as did college administrators, that is, slightly higher than faculties but below governing boards. There were other notable discrepancies, e.g., faculties rated freedom higher in importance than did people of the communities. Also students expressed much more discrepancy between desired and existing achievement in "individual student development" than did the faculties. These are certainly not all results of the study. The work of both Gross and Peterson demonstrates that between various groups there are sufficient discrepancies regarding what is expected of higher education to indicate conflicts of interest and sources of discord for which responsible administrators must assume the initiative in encouraging adaptive responses.

Delphi procedures. The Delphi Technique or Method, including Delphi Conferencing, may be a useful tool for identifying instructional expectations. Dalkey and Rourke (1971) have tested Delphi procedures in formulating criteria and objectives in higher education and found them appropriate. They may be designed to reach consensus goals, or to develop a strong set of pros and cons concerning a given issue. Huckfeldt (1972), working in the NCHEMS project at WICHE has used Delphi to make forecasts about post-secondary education. Anderson (1970) reports the techniques were used by the faculty in the College of Education at Ohio State University as one strategy for helping to set goals and allocate resources. The School of Education at the University of Virginia employed Delphi to assess the needs, desires, and opinions of its clientele (Cyphert and Gant, 1971). Delphi procedures were employed during development of the IGI (Peterson, 1971; Uhl, 1971).

Turoff (1971) lists five situations where the Delphi method clearly has an advantage over other alternatives for collating informed judgments (p. 317):

> Where the individuals needed to contribute knowledge to the examination of a complex problem have no history of adequate communication and the communication process must be structured to insure understanding.
>
> Where the problem is so broad that more individuals are needed than can meaningfully interact in a face-to-face exchange.
>
> Whre disagreements among individuals are so severe that the communication process must be refereed.
>
> Where time is scarce for the individuals involved and/or geographical distances are large, thereby inhibiting frequent group meetings.
>
> Where a supplemental group communication process would be conducive to increasing the efficiency of the face-to-face meeting.

These conditions seem descriptive of the situation in most colleges and universities. The size and complexity of the staff usually prohibits meaningful dialogue in spite of the expertise and sincerity of its members. Their time is limited.

Disagreements are apt to be severe and held very deeply. Even where the governance structure seems to be functioning well, the Delphi can be a welcome supplement to a committee meeting. Delphi would seem to be particularly effective in alleviating those problems most liable to adversely effect committee decisions, namely: (1) manipulation by the person who talks the most, is most skilled at small-group interaction, is most obstinate, or who is perceived as an authority; (2) lack of involvement by a sufficiently representative group; (3) reluctance to abandon a position that has been publicly expressed; (4) bandwagon effects; (5) peer pressure; or (6) boredom from excessive unproductive time. It also tends to have the effect of keeping discussion focused on the issues and forcing participants to sharpen their arguments if they want to make a point. The Delphi is described by Pfeiffer (1968, p. 152-153) as follows:

> The first questionnaire may call for a list of opinions involving experienced judgment, say a list of predictions or recommended activities.
>
> On the second round, each expert receives a copy of the list and is asked to rate or evaluate each item by some such criterion as importance, probability of success, and so on.
>
> The third questionnaire includes the list of the ratings, indicates the consensus, if any, and in effect asks the experts either to revise their opinions or else to specify their reasons for remaining outside the consensus.
>
> The fourth questionnaire includes list, ratings, and consensus and minority opinions. It provides the final chance for revision of opinions.

It is feasible to operate a Delphi by mail, involve participants not usually considered in institutional goal setting, and treat data from different groups separately. The latter would have the advantage of permitting planners to know which groups had similar or different goal values and to engage in "public relations" or educational efforts to change opinions when deemed desirable--or necessary. It can be used to get the public "in at the beginning" instead of treating patrons and clients as though their opinions were of no value, reporting to them after-the-fact or trying to hide adverse but important information from them.

Three cautions to using the Delphi should be noted. First of all, the possibility for reflecting extreme positions of opinion should be maintained throughout successive administrations of the instrument. That is, items should not be eliminated because of a low number of responses. If the opportunity for divergent responses is reduced, persons at the extremes will tend to drop out of the study and the results will reflect a false convergence. Secondly, during the time it takes to complete the Delphi, conditions can so change that the results are irrelevant. For example, during the past four years many small colleges have suddenly shifted their basic mission from training teachers to some other focus as a reflection of the job market. The results from a Delphi completed two years ago might thus lack currency. Third, the statements must be as unambiguous as possible. Sometimes what may appear as lack of consensus is really lack of understanding of the statement.

Employment contracts. Employment contracts based on performance have met with various degrees of success at elementary and secondary levels. In at least one instance, Passaic County Community College, they were examined for use at the community college level. As currently proposed, they do not seem applicable at the college level except in a restricted sense, e.g., a college might agree to provide training to a certain number of elementary school mathematics teachers for a stipulated price. The "Sample Employment Contract" shown in the book by Roueche and Pitman (1972) is probably characteristic of others. The following quote may be sufficient to provide the "flavor" of the obligations stipulated (p. 125):

> The following criteria of efficiency are prerequisite for the rank of full professor:
>
> (a) The full professor will be responsible for designing, implementing, managing and evaluating learning experiences for a minimum of 960 student credit hours per semester.
>
> (b) At least 90 percent of the students enrolled in the full professor's classes at the time of registration shall achieve stated objectives at a level satisfactory for transfer to a senior institution if in a transfer course, or at a level satisfactory for employment if in an occupational course.
>
> Furthermore:
>
> (a) A faculty member in any rank may qualify for or attain any higher rank following any three academic years of performance at the higher level.
>
> (b) A reduction in rank for inefficiency will occur after three (3) consecutive years wherein the criteria for a given rank are not met; in the case of the instructor rank, the individual will be dismissed for inefficiency.

While such employment contracts are currently perceived by academics as inimical to a good teaching employment. Such conditions may also increase the bureaucratic nature of colleges and universities.

Charters of accountability. Charters of accountability may be perceived as a tool for internal accountability that might improve the capacity of the institution for external accounting. The tool is described by Scheid (1965) in relation to the communicated purposes and objectives of a company and by Lopez (1970) in relation to education. Scheid is adamant that accountability can be delegated quite precisely, that functional performance can be measured and that these measurements can be employed for making evaluation (or accountability) judgments. It would certainly impact education if for no other reasons than that it requires: (1) specification of overall institution purposes, (2) disclosure of important objectives, (3) a list of what obligations must be met, and (4) authorization to perform or to obtain the wherewithal to do so. These last three conditions have not characterized university accountability transactions. While the charter is an agreement between two individuals or groups, one superordinate and the other subordinate, both parties are completely involved in consultation, negotiation, and discussion. Scheid reports that ". . . individuals respond more appropriately and willingly to objective evaluation of their performance than to subjective trait appraisal" (p. 92).

The primary deficiency in both employment contracts and charters of accountability as means for clarifying what should be expected of a professor is that they imply a governance structure involving a bureaucratic or superordinate-subordinate relationship. Both Gross (1971) and Hind (1971) have suggested that the governance structure in colleges and universities is more political and associative than bureaucratic or authoritarian.

Collective bargaining. Obviously Keck (1972) does not perceive college governance as associative. He effectively argues that collective bargaining is a consequence of traditional faculty agencies becoming ineffective in the face of bureaucratic decision making by organizational managers. He thinks it is now necessary for the ". . . illusion of independent professional entrepreneur . . ." to be cast aside ". . . within an institutional framework that is organized and run according to the principles of industrial management" (p. 51). He sees few budget decisions as emanating from the department level; a senate or council as having no legal basis, and consequently being ineffective; the AAUP as being almost as inadequate; and the industrially oriented university management as ". . . not susceptible to moral suasion" (p. 52).

> The managerial bureaucracy is immune to pleas of humanity, decency, democracy, or academic freedom. It is equally immune to sanctions that are not backed by the power of enforcement. University management is well aware that the general public couldn't care less about what the AAUP (or any other organization) thinks of this or that university. They also know that, given the present condition of the job market, professional sanctions cannot hurt them. (p. 52)

Whether collective bargaining, ". . . a system of shared authority based on a process of bilateral decision making between two agents. . . utilizing legally established procedures for reaching mutual agreement" (Keck, p. 52), will prove a useful means of establishing obligations remains, at this time, a moot point. If the trend persists on the part of faculties to support the concept of collective bargaining, then the political model as perceived by Baldridge (1971) will have only limited applicability, for example, during the time when basic obligations for which the agent is to negotiate are being decided. The model of the university as a bureaucracy will be enhanced, although the concept of the university as an industry producing a specific product does not seem feasible. Contracts will probably focus on activities of the faculty rather than outcomes.

Task analysis procedures. Over the past two years Carl, et al., (1972) have been engaged in a study to analyze and describe centers engaged in research, development, diffusion, and evaluation (RDDE). While the procedures developed to conduct that analysis have had only minimal application in higher education, they appear to offer a means of meeting some of the anxieties created by suggestions for improving accountability and some of the deficiencies of other faculty activity analysis procedures (Romney, 1971). Those fears expressed by academics that their most important but subtle production may be unrecognized, or that they may be judged on the basis of inappropriate criteria and standards, are dealt with directly by these analysis procedures.

The procedures require a new conceptualization of output. Output is the designation applied to whatever an individual produces, whether it is a product (a book), event (an interview), or a condition (mutual respect). Implementing the procedures usually requires the examination of artifacts, and talks with executive administrators, an outside agent (or an internal agent whose institutional mission includes such activities) develops a set of guidelines as to who should be interviewed and what questions should be asked. Interviews are then conducted by means of a "lead and probe" strategy providing each person opportunity to describe their outputs, to decide what evidence indicates quality performance, and to suggest standards for judging. Descriptions prepared by the interviewer are submitted to the individual to insure that agreement is reached that his outputs and the standards for

judging them are adequately described.

From these interviews outputs of the institution can be compared to outputs of services within the institution to see if the latter are contributing to the former. In most colleges and universities there will be independent and, perhaps, even incompatible objectives (outputs). This condition may be perceived as desirable (Brandl, 1970).

Instruction is an obligatory relationship. The administration of a college or university, the constituencies of the institution, and the members of the teaching and support staffs, all have perceptions as to what is expected of each other and of themselves. The relationship would be improved if those involved could do one or both of two things: (1) agree on what obligations each has toward the others in implementing the instructional program of the institution; (2) establish a means of accounting to each other, of communicating to one another about what they are doing, the apparent effects of what they are doing, and their judgments as to how others involved are fulfilling what had been expected of them. In turn, accounting permits expectations to be clarified and reduces conflicts resulting from misunderstandings.

Obtaining and Disseminating Information

A cartoon by Lichty, "Grin and Bear It," pictures a group of corporation executives in a conference session. The caption has the chairman saying, "Since the activities of this company are a matter of public record, the purpose of this meeting is to devise means of covering our tracks in the future!"

Lichty seems to have captured the essence of what the current emphasis on accountability is trying to avoid. Current emphasis in accountability seems to be toward developing such information as is necessary to enable the agents and agencies involved to: (1) know what can be expected of each other and (2) have some evidence as to how well those expectations are being met. In brief, the confidence that can be placed in the validity, accuracy and adequacy of available information is the core of viable accountability.

There are a variety of barriers to developing adequate information. First of all, external demands for information obviously threaten the rights of an institution to autonomy. Throughout an examination of external accountability, the question of the right of colleges to self-determination regarding responsibilities and disclosure of information must be examined in light of how institutions and their clients and patrons can be expected to respond to such autonomy. Autonomy is a relative value. It varies considerably among institutions. It also varies from one geographic region to another.

Unfortunately the arguments about wanting to protect autonomy are not very convincing. There are too many examples of colleges sacrificing autonomy for other gains. Acceptance of categorical federal aid; basing merit, promotion, and tenure on standards prescribed by professional organizations of the disciplines; employing state police to control campus conflicts; and seeking court action in personnel disputes have seriously weakened arguments supporting institutional autonomy. To the cynical, the willingness of institutions, and their agencies and agents, to accept donations to which are attached stipulations regarding their use is sufficient evidence that autonomy has always been a virtue to be sold--or at least employed in bargaining.

The primary arguments opposing changes in internal accountability are apt to center on threats accountability is perceived as posing to **faculty** academic freedom. Although academic freedom is not defined as clearly as it might be, its importance varies less between schools than does autonomy, and it is apparently a highly valued educational goal (Gross, 1971 and Peterson, 1973).

Proposed changes in accountability should avoid weakening academic freedom. A worthwhile goal of accountability could be to strengthen that freedom. But opposing accountability "on principle" is a posture that endangers academic freedom. Opponents to change in accountability should be encouraged to develop their opposition rationally and thoroughly. The best defense against infringing on others' rights is to be sensitive to those rights and to provide every available means for their adequate defense.

A third barrier to developing adequate information is the inadequacy of procedures for assessment. It is difficult to judge how realistic expressions of concern about invalid and inaccurate assessment are. Brown (1970) has suggested that compromise is essential, that most measures are really "proxies." "If proxies operationally assist resource allocation, if decision-making is better with the proxies than without, this alone is justification for their adoption" (p. 29). Brown groups proxies as **input**, **output**, or **value added**. Of course the most meaningful proxies are those that measure change, but if those are not available, he recommends employing second best.

At the WICHE conference both Enthovan (1970) and Brandl (1970) were cautious in their predictions that anything but the most crude indices of educational effectiveness would be found. Enthovan suggested three uses to be made of output measures (p. 51):

1. aides in allocation decisions within the university,

2. aids in broader allocation decisions between higher education and other public programs,

3. aids in evaluating the effectiveness of different teachers, teaching methods, or curricula.

He pointed out that *measures for one purpose will probably not be the same as those for another purpose and that we may not even have a way of relating them to each other.* The suggestion is that, "Because there is no agreement on purposes or on relative values, there is no 'optimum' program for the university. There are only better and worse programs. Avoiding bad programs is a sufficiently ambitious goal to keep us all occupied for many years" (p. 53). The motto is, "It is better to be roughly right than precisely wrong" (p. 53).

It is possible that part of the concern about information obtained as a consequence of assessment stems from anxiety that measurement may be **too** accurate and valid. That is, fear that assessment may result in disclosure of weakness may be increased as the validity of the assessment procedure increases. To the extent that information is seen as being used for retribution rather than improvement of instruction, the anxiety is explainable.

One of the most difficult barriers to penetrate is the one raised by those colleges, programs and professors that say, "What we produce cannot really be measured." The possibility that outputs will be viewed too narrowly, that subtle effects will be overlooked, must be reduced. There are some extremely difficult measurement problems. But, in the main, if something has not been measured it is usually because it has not been thought that measuring it was important. Whenever college personnel consider it essential that their outputs be measured, for example should they become dissatisfied with unsystematic and invalid appraisals of teaching, then teaching will be measured. The current lack of concern about such measurement is primarily because teaching performance is not a factor in determining the reward structure of the college (Hind, 1970).

Mager (1968) has an unsympathetic response to those who are defensive about having outputs assessed (p. 69):

> "You can't measure the effects of what I do."
> "Why not?"
> "They're intangible."
> "Oh? Why should I pay you for intangible results?"
> "Because I've been trained and licensed to practice."
> "Hmm . . . all right. Here's your money."
> "Where? I don't see it."
> "Of course not . . . it's intangible."

Defensiveness is justified, and should be encouraged, when there has been no prior agreement on goals, on what will be accepted as evidence of output, or the uses to be made of such information.

Providing Information for External Accountability

The administrator must take the initiative in making intelligent responses related to accountability. Not all demands for information should be answered by supplying it. Not all information should be disclosed. Disclosure should frequently precede demand. It requires some sensitivity to the needs of others, and a professional basis for selecting alternatives for an administrator to know what responses to make in terms of supplying information. Some information should be supplied on demand whenever possible. Some legitimate needs for information that would be useful in meeting both requirements for internal management and external accounting, and which could be collected and stored in anticipation of need. Attempts to obtain and employ such data in educational management have met with less than outstanding success, partly because of inability to identify and assess valid value-added measures of outputs, partly because institutions of higher education apparently do not have the organizational structures to support extensive data collection, and partly because many administrators remain unconvinced of the value of their use. In the main, colleges have been apathetic, and at times deliberately resistant, to obtaining and reporting accountability information.

Glass (1972) offers an excellent guide to determine what categories of information might be assessed and reported for external accounting. While the following list is not exhaustive, it illustrates classes of information for each of the categories Glass proposes.

1. In relation to curriculum:

   a. A statement of the mission of the institution, that points out the desirability of a variety of goals and reviews those that are contradictory and those that are compatible.

   b. Descriptions of each program, course, or sequence of study, including expectancy tables relating entry data to expected level of performance.

   c. A statement of policy describing how decisions are made for purchasing instructional materials.

   d. A description of the programs for encouraging superior instruction and/or improving inferior instruction.

e. A record of the number of teaching hours professors have missed and the reasons for these absences.

f. The number of student hours taught at various levels by professors with various levels of training.

g. For programs that are pre-professional or vocational in nature, the latest information related to education and employment opportunities.

h. Student evaluations of courses and instructors.

i. Estimates of the adequacy of library holdings.

2. In relation to student growth and well-being:

a. Studies on campus 'climate.'

b. Reports on the activities of pupil personnel services.

c. Records of students entering, grades received, student progress through college.

d. Information on followup studies of graduates.

e. Information as to why students drop out of school.

3. In relation to personnel:

a. Procedures for selecting staff.

b. Procedures for evaluating instructional competence.

c. Procedures for dismissal.

d. Benefits, e.g., retirement and sick leave policies.

4. In relation to finances:

a. Credit-hour costs in programs and courses, including any special fees and how they are spent.

b. Procedures for letting contracts.

c. Uses made of discretionary funds.

d. Sources of funds.

e. Cost for a student to go through a program.

f. Costs of support services.

g. Building plans (should be included in Community Planning Committee reports)

5. In relation to legal obligations:

a. Age, race, sex, rank, and salary of all staff.

b. Policies related to the discipline of students.

c. Procedures by which money is collected from students.

This information could be collected and processed internally. All of these activities can be monitored by an agent external to the institution and a report of that monitoring made public. It would proyide disclosure that is candid and likely to be well received by constituencies. If this information is not available, that in itself reveals deficiencies in accountability. The primary reason for fearing such accounting is that it may both encourage and allow for external control, that is, its availabilty may threaten autonomy. This study did not disclose information as to the extent the availability of information resulted in its being used by outside agencies in ways inimical to the welfare of the institution.

Developing information in such categories is procedurally not unlike that of accreditation. Accreditation has tended to fall into disrepute because the judges have been closely allied with the establishment. Accreditation agencies also reduce an institution's autonomy. An institution that conducts its own appraisal, has that effort independently audited, reports areas of satisfactory and unsatisfactory attainment, and publicizes intents to make changes, may establish credibility with its constituencies that justifies maintaining autonomy.

One of the more sensitive problems concerning public disclosures of information relates to issues of confidentiality. Arnold (1972) has written a position paper on the influences of "full disclosure" in which she suggests that it seems traditional for citizens in the United States to assume public right to information and to examination of government. She writes that Americans today demand and receive information about the costs and conduct of many government programs, that this information bears on choices they make, and that educators should be cheered by this new awareness as these demands are turned to requests for information about the costs and conduct of higher education. Although the accuracy of this perception is questionable, Arnold has raised an issue worth commenting on.

Computer technology may facilitate responsiveness to demands for external accountability. Masses of data can be stored in a variety of ways to meet various retrieval needs. The combination of increased demand for disclosure and increased capacity for responding to demands for disclosure may endanger institutional autonomy, and academic and personal freedom. There are no precedents in education to suggest that pledges of confidentiality regarding personal and personnel matters can be given with assurance that they will be kept. Privileged communication has not been extended to the relationships between college persnnel and their clients and patrons. However, it is technically possible and practically feasible to provide 'blind repositories' where sensitive data contain no names, only code numbers, with key to matching numbers and names located outside of the United States and which cannot be subpoenaed.

But most public demand for disclosure is not related to student or faculty personnel transactions of a personal nature. They are related to outputs of the university and the costs of achieving them, or to information about kinds of programs offered. Colleges do not have a history of candor in relation to public information. This may account for the creation in some states of governing councils in place of coordinating councils.

Dissemination of data is essential in accountability. Adaptations cannot be made unless information is shared. Two certain ways of weakening accountability are to: (1) conduct thorough and intensive assessments and then not report the results of that assessment or (2) disseminate systematically obtained information that is never acted upon.

Plans for dissemination should be developed as other changes are planned. Who should collect data? Process it? Distribute it? Have access to it? These questions must be addressed and the answers made part of the available information before changes in accounting are implemented. Credibility is damaged with one's constituencies if they become aware of deliberate attempts to hide information that they consider should be made publicly available. But while candor is critical in disclosure, not all information should be made public knowledge. A professor's rating on a teaching performance appraisal conducted by his colleagues is somewhat analogous to one's score on a test of intelligence. The data should not be disseminated to those who cannot understand it, nor should they be utilized in contexts where it was not intended that they be employed.

Experienced administrators are aware of the kinds of information that will be requested by their state legislatures and its committees. As Gage (1970b) has indicated, when data needs can be anticipated, an institution can demonstrate responsiveness by having information available on call. College administrators can usually take the initiative in such disclosures, although the creation of governing boards rather than coordinating boards suggests that in some states their reports were no longer credible. Glenny (1971) has described the hazards of creating boards with insufficient power to protect the public vs. agencies with power that threatens institutional autonomy and initiative.

Providing Information for Internal Accountability

In this report the basic concern is instructional accountability. It is difficult to achieve external accountability in the absence of effective internal accountability, particularly in regard to instruction. While some data are useful for both external and internal accounting purposes, information related to the teaching performance of individual professors probably has more internal than external value.

Obviously the critical issue in assessing instruction within the university is the difficulty of developing suitable assessment procedures that will meet essential measurement standards. Perhaps the best of the more current publications integrating the theoretical and practical problems relating to assessing teaching effectiveness is that by Ronan (1971). In this document it seems sufficient to say that, at the college level, assessment of instruction involves few theoretical issues different from teaching at other levels. It does involve some practical problems that are more noticeable in the academic world.

There seems to be considerable consensus among those who have studied problems of teaching effectiveness that the ability to instruct is not a unitary trait. The hangup in research on teaching effectiveness has been: (1) the inability to establish acceptable criteria of student performance, and (2) the inability to correlate teacher performance and student performance. Justiz (1969), in an excellently designed study in secondary level teaching, has shown that:

1. Pupil performance on adequately developed examinations, can be used to measure teacher effectiveness.

2. General teaching ability (GTA) can be reliably measured in terms of pupil achievement. GTA is ... "That ability which the teacher brings to the teaching situation other than knowledge of subject matter" (p. 54).

3. Pupil achievement can be used to identify predictors of teaching effectivenss.

Experimentation with procedures and variables similar to

those employed by Justiz would seem useful at the college level. That is, it would be worth trying to separate GTA from other variables; however, the probability is low that professors would permit Justiz's procedures, of having teachers teach "unfamiliar" material, to be used in a college setting. Establishing some criteria based on student performance would permit testing the validity of process criteria and trait criteria.

The results of the Oregon Studies by Carl, et al. (1972) and the preliminary work by Manning (1973) suggest that professors can and should be involved in determining a variety of instructional outputs. Analyzing these outputs to determine their relationship to student outputs is a difficult, but not insurmountable, research problem (Turner, 1972). While little research has been attempted in employing the Carl RDD&E model to establish standards for judging outputs, the procedure would appear on the surface to have as much validity as faculty activity analysis, at its current stage of development, in obtaining output criteria for analyzing internal accountability, particularly in determining standards. Both procedures need further study in terms of: (1) faculty acceptance, (2) which procedure is most amenable to implementation, (3) which provides the most valid results, and (4) which is most economical to implement. It is in researching and establishing criteria of teaching effectiveness that the particular idiosyncracies of college personnel become most inhibitory to adequate assessment. Stake's (1971) suggestion that individual professors be permitted to establish their own criteria has apparently not been explored.

In the absence of acceptable criteria for assessing instruction, many colleges employ other criteria for determining justification of merit, promotion or tenure (rewards). In larger universities research productivity and other evidence of scholarship are employed in such valuations. This in effect has the frequent consequence of having the judgment regarding quality of scholarship made by persons outside the institution, e.g., the reviewing committee of a journal. Within the institution the judgment may be based on counting (Gustad, 1967). Many colleges and universities reward activity on committees, particularly those involved in academic governance.

While it is acceptable to employ criteria such as described in the preceding paragraph for making decisions related to distribution of rewards, it is not valid to employ them as though they were indicators of teaching performance. The extent they are used in a decision to reward a faculty member is an indication of how valuable they are considered to be, that is, they may be more or less important than teaching. Such evidence should not be currently considered any more than superficially related to one's competence as an instructor.

While professors express interest in instruction and think teaching should receive increased emphasis in determining rewards (Hind, 1971; Hildebrand, 1971), they do not want to reduce the time spent in research and scholarship (Hind, 1971). Hind suggests that professors may have a conflict of values and that they are already devoting more effort than would be predicted to tasks (teaching) that haven't much influence on how they are rewarded.

By far the most prevalent obligation laid on most professors is that they must teach. Ignoring this obligation can get one fired, even if fulfilling it doesn't result in promotion or other reward. Part of the lack of emphasis on improving college teaching is because the faculty, who really control the system of rewards, are apparently not sufficiently dissatisfied with **minimum** acceptable levels of teaching performance to overcome inertia and work for improvement.

The following observations are suggested with "tongue in cheek" as a means of dramatizing what might be anticipated to occur if professors valued instruction:

1. reward systems would be based primarily on demonstrated performance related to instruction;
2. faculty would be earnestly involved in institutional goal setting and prioritizing around a mission of teaching;
3. a sizeable portion of the institutional budget would be spent on efforts to **improve** instruction;
4. professors who exhibited "noncompliant compliance" (Miller, 1972, p. 19) toward evaluation of their teaching would feel some evidence of peer group dissatisfaction;
5. prospective employees would inquire about class sizes, library facilities, availability of instructional support services, the institutional program for improving instruction, documentation of criteria and procedures for evaluating instruction, research on campus directed at college-level instruction, the type of student personnel services in operation, and the work being done by the test center before accepting an appointment;
6. legislatures would pass statutes limiting the number of hours a professor could spend teaching and prescribing the time that must be devoted to research, governance and service.

Procedures for judging teaching effectiveness. Miller

(1972) describes five procedures for evaluating classroom teaching: (1) student evaluation, (2) classroom visitation by colleagues, (3) examination of teaching materials and procedures, (4) weighing special incidents (includes evidences of good or bad teaching not found elsewhere), and (5) self-evaluation. His book contains simple descriptions of procedures and instruments used in assessment. Regardless of the procedures used, Miller is adamant that: (1) evaluation of teaching should be only part of the overall evaluation of a faculty member's professional competence; (2) institutional goal setting must be taken more seriously if faculty evaluation is to be tied to goals; (3) department chairmen and deans must be actively involved; (4) the processes must be systematic, manageable, and economic; (5) the system should be used positively. In this study there was little evidence uncovered to suggest that assessment of instruction was used extensively in the way that is frequently suggested as the primary reason for such evaluation, that is, toward improvement of instruction. From the meager responses to the questionnaire submitted, there is also an indication that: (1) few colleges have taken goal setting seriously, (2) the processes for evaluating instruction are seldom very systematic.

Michigan State University has been cited previously (p. 11) as one school that has employed discretionary resources in attempting to improve instruction. (See also a comment on MSU's student evaluation scale, p. 11). A second university that appears to have implemented procedures for judging teaching effectiveness is Colorado State University (*Comments*, March 29 and April 5, 1973; Office of Instructional Development, 1973). Each faculty member is encouraged to employ a minimum of three means of collecting data about his teaching (*Comments*, 3/29/73, pp. 2 and 3):

1. obtaining reactions of presently enrolled students through the use of the ASCSU course profile;
2. making an audio tape of classes for subsequent review;
3. making a video tape of one or more classes . . . and having the tapes critiqued by the office of instructional development;
4. administering pre- and post-tests to assess student gains in achievement;
5. asking departmental peers to 'sit in' on several classes and give their reactions to what they observed;
6. following up the progress of students in subsequent courses when prerequisite courses are taught;
7. contacting students after they have graduated to obtain their opinions about teaching effectiveness;
8. contacting employers where appropriate about the performance of former students on their jobs;
9. inviting the department head or dean to visit classes and give suggestions;
10. forming a special advisory panel of a few interested students in each class and meeting with them once a week to obtain suggestions;
11. submitting course outlines, syllabi, tests, etc., to professional associations or other qualified groups for review and critique.

The Academic Vice President goes on to suggest:

> Every faculty member should engage in at least three of the following development activities each year.
>
> 1. attending special teaching seminars and teaching improvement programs;
> 2. reviewing the literature on teaching methodology in the field to obtain new ideas for teaching the subject matter;
> 3. conducting experiments to determine whether new techniques are suitable for permanent incorporation into one's teaching repertoire;
> 4. team teaching with a highly respected colleague and obtaining suggestions from this person; and
> 5. exchanging classroom visitations with respected colleagues in nearby colleges and universities.

It is the author's understanding that this statement has been approved by the faculty as setting guidelines for policy. At least faculty are provided resources to support their efforts to improve instruction.

Student evaluation. Although Miller (1972) cites financial exigencies and a trend toward re-examination of goals and philosophies as two reasons for the current interest in instructional accountability, the original press for internal accountability probably came from student discontent. This cause was also cited by Miller.

The tendency has been for teaching faculty to be judged by their colleagues on the basis of their scholarship and for instructional competence to be assumed. Students, on the contrary, assume scholarly competence and search for

evidence of their professors' teaching competence (Hammond, et al., 1969).

One inference to be drawn is that people tend to look for evidence of competence in areas in which they either: (1) feel qualified to make judgments, or (2) have an interest. Part of the reluctance to pass judgment on the quality of any work done by colleagues is based on the difficulty of evaluating work outside one's own discipline. This accounts for each department having an interest in establishing unique criteria for evaluating its faculty.

Students may feel quite confident of their ability to make judgments about a professor's teaching in almost any course in which they are enrolled. Interestingly enough, and perhaps predictably, professors do no accord students that capability. Warrington (1972) reported that the correlation between the ratings of faculty and students as to whether items should be included on a "Student Instructional Rating System" was .68 and the correlation between whether faculty thought students had enough information was .54. Astin and Lee (1966) point out that concern with impact of instruction on the student has not resulted in turning to students as an important source of information about those impacts. In fact, a survey of 1100 colleges and universities revealed that in only 12.4 per cent of them were systematic student ratings used as a source of information in evaluating teaching effectiveness (Astin and Lee, 1966).

Gustad (1967) conducted two surveys for the American Council on Education, one in 1961, the second in 1966. He cited as major trends: (1) a substantial decline in the use of systematic student ratings, (2) a substantial decline in the use of classroom visitations as means for obtaining information relevant to teaching performance. The utilization of committee evaluations and the analysis of grade distributions had markedly increased in popularity.

> It is paradoxical indeed that the academic world, ostensibly devoted to the continuous search for evidence which can be brought to bear on the solution of problems and the increase of knowledge, continues with great equanimity to tolerate a system of evaluating its members wherein, as this writer said earlier, "to call what is typically collected or adduced to support evaluative decisions "evidence" is to stretch the meaning of that honored word beyond reason." Almost a quarter century ago, Logan Wilson said, "Indeed, it is no exaggeration to say that the most critical problem confronted in the social organization of any university is the proper evaluation of faculty services, and giving due recognition through the impartial assignment of status." The almost imperceptible progress since then is eloquent testimony to the academic profession's unwillingness or inability, or both, to do what is needed to develop adequate and equitable methods for faculty evaluation (pp. 265-266).

These sources of data may not be sufficiently current since they contradict observations reported by several persons knowledgeable about activities across the national scene in higher educaton. However, they are still cited by Miller (1972).

Hildebrand (1971) suggests that students are the best judges of the extent instruction has made constructive contributions to their lives. His study indicates that different students tend to judge the same teachers as having made constructive contributions to them. A study by Costin, et al. (1971) suggests that students' ratings can provide reliable and valid information on the quality of courses and instruction. However, Wilson et al. (1973) noted that professors commonly assert that only their colleagues are truly qualified to judge competency. As Astin and Lee (1966) report, 48.9 per cent of the colleges and universities use colleagues' opinions as a source of information concerning teaching effectiveness. Professors evidently will not accept the validity of student ratings if they are to be used in making accountability decisions. Perhaps this is because students and professors differ in the **behaviors** they describe as characteristic of effective teachers (Wilson, et al., 1973). The fact that professors and students exhibit high agreement about who are effective and ineffective teachers (Wilson, et al., 1973) has not persuaded professors as to the merits of employing student ratings for decisions related to merit, promotion, tenure, in-service training or discharge. McKeachie (1970) thinks student judgments should be systematically collected for promotion decisions but that they cannot be the only assessment since department chairmen already use student judgments that have been obtained unsystematically.

Professors seem to fear that students and professors will enter into a subtle collusion where the professor sets minimal goals and the student accepts those because they require the skills they understand (McKeachie, 1970). There is some tangentially related evidence in support of this opinion. Teachers found to be effective with bright students are rated higher by bright students and students whoso achievement in a course is above that to be predicted from their intelligence and background tend to rate the teacher of that course as more effective than do students whose achievement was less than expected (McKeachie, 1970). Still, Eble (1970) reports only slight relationship between a student's evaluation of a **course** and his final grade. It seems logical that students should be able to provide information as to whether a professor has performed in such a way that they have been able to achieve outputs.

Student rating scales seem to have reliability, even if their validity is questioned, that is, even if teacher performance and student performance have not been found to correlate (Ronan, 1971). The review by Ronan (1970) suggests that there is consistent agreement among studies as to the dimensions of teacher behavior that are factors in student ratings. The scales found useful usually measure:

1. a dimension related to having organized and clear presentations,
2. a dimension of personal warmth or empathy,
3. a dimension of enthusiasm reflected by effort.

Crawford and Bradshaw (in Ronan, 1971), suggest that different raters are using different criteria and standards, and the bases for their judgments are going unspecified, for example, students may base their ratings on stereotyped perceptions of a professor's role or personal phychological needs. One intensive and sophisticated effort to identify effective and ineffective teaching behaviors as seen by students is the critical incident study conducted at the Georgia Institute of Technology (Ronan, 1971).

In relation to the current study, over a dozen **different** student rating scales were examined. (Many institutions use the same instruments.) They can be characterized as follows:

1. Most of the items deal with process criteria, e.g., "Is helpful when students have difficulty.
2. Some items are better classified as presage criteria, e.g., "Has a sense of humor."
3. There are not many items that ask a student directly what effect the professor has had on him/her (product criteria), e.g., "Has given me new appreciation."
4. Regardless of the items, they invariably require the student to make inferences rather than observations, e.g., "Is well organized."

Fahey (1970) points out that student rating scales are probably the most objective and reliable of all procedures employed for assessing teaching performance. He also presents an excellent critique of the weaknesses of such scales.

It is difficult to provide counsel as to how student rating scales might best be used, and validity depends on use. Student rating scales are probably most useful when used to meet the needs of students. That is, with their emphasis upon traits and processes, they should provide information that a student could use to select professors when confronted with multiple sections of courses. In their present form, items related to processes could be used by professors to identify elements of their teaching that could be improved. A department chairman or dean might use the same items as a means of determining who should receive training and what training they are to receive.

Student rating scales have limited usefulness for contributing to other accountability decisions because of the lack of performance standards. Few institutions have established absolute standards, even at the minimum acceptable levels. Standards based on normative comparisons do not find sufficient acceptance by most faculties. Such data also haven't much usefulness in planning remedial programs.

Student ratings can be given frequently and, if machine processed, are relatively inexpensive. This flexibility is important since teaching performance may itself change over time, and vary from one time to another.

Classroom visitation. According to Astin and Lee (1966), classroom visits are employed as a source of data regarding teaching effectiveness by the majority of departments in about 14 percent of the colleges and universities. Miller (1972, pp. 30-31) quotes Silber as commenting, "I have heard professors argue that this classroom observation violates the dignity of the profession. I heard a very good response to that by a professor of English at Virginia, who said: 'What a curious concept of dignity that a man should be ashamed to be caught at his work.

Classroom visitations are usually made by senior faculty members or department chairmen. The limitations are obvious. Visitors observe an even smaller sample of the behaviors in which a teacher must engage than do students. They frequently infer that other activities have occurred prior to and will occur subsequent to what they observe in the classroom. Further, both observations and inferences are colored by the unique characteristics and experience of the observer.

Gustad (1967) reported a decline in number of institutions using classroom visitations between 1961 and 1966. In view of the inadequacy of instruments used to focus visitations, and the absence of either criteria or standards for making judgments about instruction, such decline was justified. However, the data cited are not current and may not reflect present conditions. There is little evidence to suggest that visitations have been replaced by systematic procedures with greater validity.

An extreme example of peer judgment is described by Ashby (1973). He points out that in British colleges all faculty

members, however distinguished, are expected to teach. This is motivated by early tenure, uniform salary scales for all universities, and small student-faculty ratios. Most important to note, however, is that quality is maintained by having external examiners from other universities see that the standards for awarding degrees are about the same at other universities as at their own. While this is obviously a controversial procedure, its acceptance is unlikely in the United States.

Other methods of assessment. An obvious means by which a faculty member can report his teaching activities to others is to provide them with self-selected evidence. Its credibility is increased if the nature of what is to be reported is announced before data collection, and if the procedures for obtaining and analyzing the data are documented. Although the most frequently used sources of information in evaluating teaching effectiveness are chairmen, 85.1 per cent of the institutions reporting, and deans, 82.3 per cent (Astin and Lee, 1966), it is unclear how they obtain the information upon which their opinions are formed. Astin and Lee indicate that while the judgment of a chairman or dean, confirmed by opinions of colleagues, was the most common means of evaluating an individual's teaching competency, first hand information played only a small part in forming these judgments or opinions. Hildebrand (1971) suggests that whatever ratings are given by a chairman or dean should be open to challenge by the instructor.

In fact, most judgments of peers are not based on personal observations. They need not be if appropriate provisions are made with the professor for systematically obtaining data. Student ratings, scores on performance tests, and artifacts related to the course can be provided by the individual professor. The individual should be candid about which data provided is part of a self-report and which were obtained by others and are merely being transmitted.

Providing information about teaching performance is apparently seen by many as an obligation of teaching faculty. Such information may be used in ways that are inimical to the welfare of individuals, departments, and even institutions. In order to increase confidence that information will be used beneficially, Gage (1970b) has suggested that it be subject to some constraints:

1. Disclosure must be candid. Professors' human capacities for concealment, selective bias, distortion and expediency will be reflected in the data. A professor's professional integrity should suggest the necessity for describing as completely as possible the procedures employed in obtaining the information reported. If information is developed by a chairman or committee, the individual under consideration should have opportunity to review those data and respond to them.

2. Confidentiality is essential. If supplying information is to encouraged, individuals must be assured that the information will be used as prescribed by persons whose identity has been revealed. That is, it should be understood who is to receive what information and how that information is to be used.

3. The information disclosed should be as scientific as possible. It should create confidence in its user. Observations and inferences should be clearly distinguished. Inferences should be supported by observational data. Opinions and judgments should be clearly identified. Where feasible, measurement should be employed. Sampling of behaviors related to teaching performance should be as carefully drawn as possible so as to cover the variety of tasks related to teaching. Standards for judgments should be described.

Making Adaptive Responses

Hind (1971) suggests that the ability to manage the evaluation-reward process is the key to initiating change. One reason for suggesting that accountability can be best understood if perceived as a set of transactions is because its components are so interdependent. For example:

1. Intentions must be clarified in order to know what information will be needed.

2. Intentions are dependent upon information about what adaptations are to be made.

3. Knowing what adaptations to make depends on information about what is happening and what was intended to happen.

4. If the information obtained doesn't focus on intentions, adaptations may be inappropriate.

5. If the information obtained and distributed isn't used in making adaptations, the motivation to supply information will soon disappear.

Tollett (1970) speculates that "... if higher education has great impact upon society in any way, then society, the public sector, should want to know what that impact is and evaluate, modify, or reinforce, as the situation may require, that impact" (p. 62).

Information that can help institutions improve planning and management may also meet information needs of legislators. The consequences of such disclosure may cause the legislature to influence institutional variables related to instruction, e.g., facilities, number of personnel. It may be, however, that the capacity of legislatures for adaptive decision making is limited. If the institutions of higher education within a state are unable to explain their impacts, legislatures are restricted, largely by public opinion opposing increased taxes, in increasing financial support. In the face of financial exigencies, the response of a legislature is liable to be punitive. For example, if a particular institution placed emphasis upon quality teaching, student costs might increase to a point where a legislative education committee would place the school under an enrollment limit, hold their budget constant, or employ some other means of managing costs.[2]

The commitment for making adaptations is difficult to release. To quote Hind (1971, p. 286), "The evidence from our study, wherein the faculty in its expression of latent desires, and the administration in its policy statements, call for increased emphasis on teaching while the status quo remains, suggests that nothing will happen until some impetus is applied." It is difficult to ascertain just why this is true. Mayhew's (1972) term "syndicalism" may be appropriately descriptive. The author interprets this to encompass both the natural unresponsiveness due to the structure of the established institutions and the banding together of those with focused and unfocused concerns that support maintaining accountability as it is. Many professors apparently still perceive the university as a colloquium (Pfinister, 1970). Some pursue a philosophy that the university should not pursue any activity incompatible with decentralized decision making. This suggests that press for adapting in ways to improve instruction must come from the administration of the college. If an institution of higher education is going to improve accountability so that adaptive decisions can be made, there will need to exist or be created:

1. An atmosphere where high status is perceived as based on expertise (Hefferlin, 1969).

2. A rather permanent, centralized source of initiative for change centering in a strong and dominating president (Hefferlin, 1969, and Mayhew, 1972).

The evidence seems to support the opinion that, if any changes in either external or internal accountability are to occur, there must be powerful persons from within the institution who are committed to change. Commitment is not a sufficient condition, nor is change a sufficient objective. The direction of change should be toward improving accountability so that the intentions of an agent or agency are better understood by those involved, so that valid provisions for accounting are systematized, and so that either the adaptations are logically related to the evidence provided, or conditions are established so that the opportunity for appropriate consequences is available.

Commitment must be supported by "know how." Neither external nor internal accountability can be changed without commitment from top level executives and without personnel available who have both skills and desire to improve accountability (Dahnke, et al., 1971). It may be necessary to follow the advice of Roueche, et al. (1971) and appoint in each college a "vice-president in charge of heresy" whose primary expertise is in instructional improvement and whose obligation is to stimulate improved instructional accountability. Eble (1971) recommends establishing a center charged with promoting effective teaching. Enthovan (1970) suggests a "systems analysis office" (p. 58). The mere designation of such a center is sufficient to make such an agency suspect in the eyes of many professors and consequently to weaken its influence.

Hind (1971) indicates that, in organizations with highly professional workers, the normal pattern of superior-subordinate authority relations tend to break down. He thinks that in colleges and universities the authority tends to be on a horizontal relationship. This fits the conception that, in relation to their work, professors reject the opinions of those who are not their peers. Particlarly they resent interference by students and administrators.

The horizontal rather than vertial authority relationship has interesting implications in terms of accountability. Peers become the ones who are seen as "influential evaluators" (p. 268) and who govern all phases or components of accountability. That is, it is those who are influential in the evaluation process who are, in effect, the authority structure (Hind, 1971). Essentially this could mean that the tasks of improving accountability should be simplified. They haven't been. Though professors try to maintain the authority to establish criteria (expectations) and evaluate the performance of each other in relation to them, they have steadfastly refused to assume those responsibilities in regard to teaching. As Wilson, et al. (1973), have demonstrated, professors associate "being a good teacher" with:

1. Research Activity and Recognition
   Is well known and highly regarded for his scholarly activity, publications, and research. Confers with colleagues about research and keeps abreast of recent developments in his field.

2. Participation in the Academic Community

[2] This is a reasonably accurate description of what is reported to have occurred at Evergreen State College and Eastern Illinois State University.

Attends and participates in campus lectures, social functions, and student-oriented activities. Maintains a congenial relationship with colleagues.

3. Intellectual Breadth
   Has broad knowledge both within and beyond his field. Is sought out by students and colleagues for information and academic advice.

4. Relations with Students
   Maintains an informal and congenial relationship with students beyond the classroom. Is consistently available to students for consultation about personal and academic concerns.

5. Concern for Teaching
   Expresses concern for teaching and consults with colleagues about issues related to teaching. (pp. 33-34)

Only Research Activity and Recognition was significantly related to the academic rank and discipline of teachers nominated as effective. While Hind (1971) reports that 56 per cent of the professors questioned (all from Stanford University in the School of Humanities and Sciences) thought teaching **was** either slightly or not at all influential in determining university rewards, only 9 per cent thought the same about research. Fifty-one per cent thought teaching and 67 per cent thought research **should** be either extremely or very influential in determining university rewards.

Note that while, according to Hind, it is the faculty as a body who largely control the rewards system, it is usually the department chairman as an individual who has to defend the institution against the completely incompetent teacher. The chairman may have to defend his actions against others on the staff who, for a variety of reasons, would choose to think there was insufficient evidence that students were suffering from instructional incompetence and that, even if they were, that condition was to be preferred to crushing the professor by adverse consequences.

It is hard to know just how generalizeable are Hind's data. But it would seem rather general knowledge that, at least in the larger universities attended by a large proportion of undergraduate students, teaching performance is not rewarded by the governance processes of the institution. Whatever concerns have been expressed about elevating instruction to a position of importance in the reward system, institutions have not avoided assessments of teaching performance that are largely unsystematic and inequitable.

It is unrealistic to assume that teaching will improve in a context where it is largely ignored in determining consequences for teachers. While it would stretch the point to say good teaching actually results in punishment in most colleges, to have it go unreinforced is perhaps even more probable to result in its deterioration. Learning theory would suggest that withholding reinforcement is one of the most powerful means of extinguishing a response.

It does seem reasonable that an institutional governance structure should encourage good teaching by making whatever changes necessary. The evidence collected during this study offered very little indication that what was being proclaimed as the **primary** purpose for assessing teaching performance, that is, to improve instruction, was in fact encouraged as a consequence of evaluation. That is, professors have not been obligated for **either** the quality of their instruction, **or** for improving their instruction.

It should be recognized that none of the other transactions in accountability are useful unless the opportunity is present within the contractual relationship for alternative responses differentiated on the basis of the accounting provided. This obvious assumption sometimes goes unrecognized. When available resources are to be distributed on the basis of head counts rather than assessment of performance, the motivation to improve instruction has been weakened. Financial and political exigencies may have so seriously reduced the capacity for alternative responses that the main purpose for accountability has been weakened in the very face of increased pressure for improving it.

CHAPTER III

IMPROVING INSTRUCTIONAL ACCOUNTABILITY

In the absence of empirical tests, and with the prevailing uncertainty as to what accountability is, recommendations related to accountability seem relatively presumptuous. Nevertheless, on the basis of this review of information related to instructional accountability and personal-professional judgments, some approaches to improving accountability will be presented.

Administrators sensing dissatisfaction with instruction in their college or university should examine all aspects of accountability in relation to the three characteristics of a contractual relationship suggested in this report as critical to improvement: (1) expectations, (2) accounting, (3) adaptations. Such an investigation should be oriented toward identifying possible barriers, for whatever it is that is inhibiting instruction may lie in accountability that is dysfunctional. In addition to the barriers discussed in this paper, particular attention should be given to the article by Lopez (1970). Whoever is interested in examining accountability in a specific institution should consider the following:

1. A plan should be developed for investigating the current status of instructional accountability, for determining what transactions now function to determine what is expected, what is accounted for, and why and how, and what alternative responses are possible. This planning should probably be undertaken by a relatively small task force composed of an academic administrator of high rank who will act as the catalyst, a resource person in educational evaluation, and undergraduate teaching faculty members with some representation distributed among departments and rank.

2. The task force should familiarize itself with the literature on accountability. There are guidelines for almost every dimension of accountability, but only people within a particular context can develop an operational model for a specific institution.

3. The entire faculty should be kept informed of the decisions made by and the actions to be implemented by this task force. Remember the emphasis is upon improving instruction. Accountability is a **means** more than an end. If other means present themselves, they may be more viable for obtaining the ends desired. All those to be affected must have some sense that they are participating in planning and implementation.

4. The necessary resources must be mustered. Without resources no improvements can be expected. Viable accountability will require instrument building, data collection, processing, information distribution, follow-up, and monitoring. If the primary purpose of accountability is to be improvement of instruction, then resources to improve instruction must be available. Furthermore, discretionary funds that can be used to support accountability and instructional improvement must be available. The idea of a system planning group, instructional development facility, institutional research office, or a similar organization or center must be seriously considered. This "RDDE center" should have a staff trained to perform research, development, dissemination, and evaluation operations in higher education. Collectively this staff should be a resource for external **and** internal accountability requirements. The task force may at some point in time become the advisory committee for this center.

5. Some tasks can be anticipated and should be prepared for:

   a. The college, each department, and every program will need to develop or select a set of objectives. These may be quite broad. They should be prioritized.

   b. An analysis of **objectives** and **outputs** of the institution, the departments, the programs, and each member of the staff, including the RDDE staff, will be necessary.

   c. Each objective is going to have to have some indicators (proxies) suggested, and each output will require that some standards be developed for judging the extent it is being achieved. Proxies should be weighted.

   d. The instructional accounting system of the institution will need to be analyzed.

e. The above activities should result in circulation of some statements of what can be expected in terms of instructional responsibilities. The task force or committee may have to persuade professors that they have an obligation to provide information about either/both their own performance or that of their students. It may be possible to leave what is provided to the discretion of the individual professor, or to the discretion of each department.

f. Agreements must be reached about what information is to be collected, how it is to be collected, who is expected to collect it, and who is to receive the information.

g. Agreements must be reached as to how information is to be used, that is, the limits of adaptive responses must be defined, the decisions for which information will be used should be delineated.

h. Decision rules for responding to unanticipated requests for information should be stipulated. For example, requests that could result in infringement on institutional autonomy or academic freedom might be denied. If there are frequent crisis responses to requests for information, then the initiative for accountability lies in the wrong place. If the data could not be acted upon, then to spend money obtaining them may be a waste of resources. If information is being collected that the institution cannot afford to have disclosed, then those responsible for data management are in the position of losing control. If past experiences have suggested that data are usually used in ways that are inimical to the people or the institution, then assurance must be given that such results will not be repeated.

Some of these tasks could, and probably should, be delegated to departments. For example, each department may decide how information is to be collected and disseminated. The resources of the RDDE center should be available to departments. The task force, or advisory committee, can develop standards for judging whether the information and procedures used by each department are satisfactory.

6. Provision should be made to reward individuals or groups, e.g., departments, of the institution who engage in activities that can be judged to improve accountability and instruction. Providing financial rewards can also create the need for re-allocating resources and create conditions of anxiety and distrust. Other rewards, e.g., recognition, should be employed.

7. Provision should be made to provide released time and the resources of the institutional RDDE center and its personnel to individuals or agencies who display the greatest desire and have the most concrete plans for improving instruction.

8. Someone on the college staff, probably the equivalent of a dean of instruction, working in conjunction with department chairmen, should assume responsibility for seeing that every professor who identifies a deficiency in his **instruction** has the opportunity to engage in appropriate training. Any professor who requests help in alleviating a skill deficiency should be provided appropriate aid. This same officer of the college should maintain a continuous inservice training program based on identified needs.

9. Professors consistently reported to be "poor" teachers, should be kept informed by the designated officer of the college cited in No. 8 above, or by the department chairman, or by a personnel committee of the department, of the nature of these reports. This is hearsay evidence and should not otherwise be acted upon if the professor and the above persons can develop a program to ascertain if the reports are realistic; if the antecedent conditions leading to negative reports can be clarified; and if steps are taken to alleviate deficiencies identified in either knowledge or skills. Professors consistently reported to be deficient in teaching who resist assessment, refuse to provide information about instruction, refuse aid, or demonstrate inability to profit from it, should not benefit from the reward system of the institution unless some other aspect of their work is so outstanding that prestige is accrued by the institution. Even then, instructional obligations should perhaps be limited.

Lopez (1970) makes it clear that accountability cannot be changed when administrative procedures, organizational traditions, staff acceptance, and methods of implementation are not attuned to its purposes. It is difficult to modify any transaction whithin an institution that does not have a tradition for promoting change. So before attempting to modify accountability within any college or university, consideration should be given to what is known about each of the principal transactions that characterize accountability. Those aspects of the college that are impinging upon the contractual relationship in which accountability operates must also be carefully examined.

INDEXED REFERENCE LIST
TO MATERIALS ON
ACCOUNTABILITY
IN HIGHER EDUCATION

INDEXED REFERENCE LIST TO MATERIALS ON ACCOUNTABILITY IN HIGHER EDUCATION

REFERENCED TO PAGES IN THE REPORT

Alkin, M. L. Accountability defined. *Evaluation Comment*, 1972, 3(3), 1-5. — 1, 2

Anderson, D. P. Clarifying and setting objectives on an intermediate school district's objectives utilizing the Delphi technique. Exploring the potential of the Delphi technique by analyzing its applications: An American Educational Research Association symposium. March 4, 1970. — 12

Arnold, J. E. Broad philosophical influences impinge on considerations of "full disclosure." *Higher Education Management*, 1972, 2(3). — 17

Ashby, E. Second edition/the university ideal. *The Center Magazine*, 1973, 6(1), 37-41. — 22–23

Astin, A. W. & Lee, C. B. T. Current practices in the evaluation and training of college teachers. *Educational Record*, 1966, 47, 361-375. — 21, 22, 23

Baldridge, J. V. (Ed.) *Academic governance*. Berkeley: McCutchan Publishing Company, 1971. — 14

Barro, S. M. An approach to developing accountability measures for the public schools. *Phi Delta Kappan*, 1970, 52(4), 196-205. — 1

Brandl, J. E. Public service outputs of higher education: An exploratory essay. In Lawrence, et al. (Eds.) *The outputs of higher education: Their identification, measurement, and evaluation*. Boulder, Colorado: WICHE, 1970. — 6, 15

Brown, D. G. A scheme for measuring the output of higher education. In Lawrence, et al. (Eds.) *The outputs of higher education: Their identification, measurement, and evaluation*. Boulder, Colorado: WICHE, 1970, 26-28. — 2–3, 6, 7, 15

Carl, L. M., Thomas, G. P., Smith, C. A., Morse, K. R., & Clukey, D. *The Oregon Studies*, Vol. 5. Monmouth, Oregon: Teaching Research, 1972. — 10, 14

Carnegie Commission on Higher Education *Capital and campus: State responsibility for post secondary education*. New York: McGraw-Hill, 1971. — 2, 7

Center for Instructional Research and Curriculum Evaluation. *The accountability notebook*. Springfield, Illinois: Office of the Superintendent of Public Instruction, 1971. — 1

Coston, F., Greenough, W. T., & Menges, R. J. Student ratings of college teaching: Reliability, validity, and usefulness. *Review of Educational Research*, 1971, 41(5), 511-535. — 21

Cyphert, F. R. & Gant, W. L. The Delphi technique: A case study. *Phi Delta Kappan*, January 1971, 272-273. — 12

Dahnke, H. L., Jones, D. P., Mason, T. R., & Romney, L. C. Higher education facilities planning and management manuals. Boulder, Colorado: WICHE, 1971. — 24

Dalkey, N. C. & Rourke, D. L. *Experimental assessment of Delphi procedures with group value judgments*. Santa Monica, California: Rand Corporation, 1971. — 12

INDEXED REFERENCE LIST TO MATERIALS ON ACCOUNTABILITY IN HIGHER EDUCATION

REFERENCED TO PAGES IN THE REPORT

Downey, L. W., Seager, R. C., & Slagle, A. T. *The T.P.E. opinionnaire: An instrument for obtaining opinions regarding the task of public education.* Chicago: Midwest Administration Center, University of Chicago, 1958. — 3

Dyer, H. S. Toward objective criteria of professional accountability in the schools of New York. *Phi Delta Kappan,* 1970, 52(4), 206-211. — 2, 3

Eble, K. E. *The recognition and evaluation of teaching.* Project to improve college teaching, Salt Lake City, Utah, November, 1970. (ED 046350). — 21

Eble, K. E. *The recognition and evaluation of teaching.* Washington, D.C.: American Association of University Professors, 1971. — 8, 24

Enthovan, A. L. Measures of the outputs of higher education: Some practical suggestions for their development and use. In Lawrence, et al. (Eds.) *The outputs of higher education: Their identification, measurement, and evaluation.* Boulder, Colorado: WICHE, 1970, 51-58. — 15–16, 24

Fahey, G. Student ratings of teachers: Some questionable assumptions. A paper presented at a conference of the Institute for Higher Education, Pittsburgh, December, 1970. — 22

Gage, G. E. A model for establishing a priority of educational needs. Paper presented at the annual meeting of the National Council on Measurement in Education, March, 1970(a). — 3

Gage, G. E. Distribution of evaluation information. In C. F. Paulson (Ed.) *A strategy for evaluation design.* Monmouth, Oregon: Teaching Research, 1970(b). — 18, 23

Glass, G. V The many faces of "educational accountability." *Phi Delta Kappan,* 1972, 50(10), 636-639. — xi, 1, 2, 4, 16–17

Glenny, L. A. The anonymous leaders of higher education. Speech delivered to the Association of Institutional Research, Denver, May, 1971. (HE 002702). — 7, 18

Gross, E. Universities as organizations: A study of goals. In J. V. Baldridge (Ed.), *Academic governance.* Berkeley: McCutchan Publishing Company, 1971. — 3, 6, 7, 11–12, 14, 15

Gustad, J. W. Evaluation of teaching performance: Issues and possibilities. In C. B. T. Lee (Ed.) *Improving college teaching,* Washington, D.C.: American Council on Education, 1967. — 19, 21, 22

Hacquart, A. *The recruitment and training of university teachers.* Ghert, Belguim: International Association of University Professors and Lecturers for UNESCO, 1967. — 8

Hammond, P. E., Meyer, J. W., & Miller, D. Teaching versus research: Sources of misperceptions. *Journal of Higher Education,* 1969, 40, 682-690. — 20–21

Hefferlin, G. B. L. *Dynamics of academic reform.* San Francisco: Jossey-Bass, 1969. — 24

Hildebrand, M. *Evaluating university teaching.* Berkeley: Center for Research and Development in Higher Education, 1971. (ED 057748). — 19, 21, 23

INDEXED REFERENCE LIST TO MATERIALS ON ACCOUNTABILITY IN HIGHER EDUCATION

REFERENCED TO PAGES IN THE REPORT

Hind, R. R. Analysis of a faculty: Professionalism, evaluation, and the authority structure. In J. V. Baldridge (Ed.) *Academic governance.* Berkeley: McCutchan Publishing Company, 1971. — 6, 7, 8, 14, 16, 19, 23, 24, 25

Hough, R. R. The outputs of undergraduate education. In Lawrence, et al. (Eds.) *The outputs of higher education: Their identification, measurement, and evaluation.* Boulder, Colorado: WICHE, 1970. — xi

Huckfeldt, V. E. *A forecast of changes in postsecondary education.* Boulder, Colorado: NCHEMS–WICHE, 1972. — 12

Hyer, A. L. From gold stars to green stamps. *Audiovisual Instruction,* 1971, 16(5), 4-8. — 1, 4

Institutional Research Program for Higher Education *Institutional goals inventory.* Princeton, New Jersey: Educational Testing Service, 1972. — 12

Justiz, T. B. A reliable measure of teacher effectiveness. *Educational Leadership Research Supplement,* 1969, 3(1), 49-55. — 18

Kaufman, R. A. Accountability, a system approach and the quantitative improvement of education-an attempted integration. *Educational Technology,* 1971, 11, 21-26. — 3, 4

Keck, D. College governance and collective bargaining. *Today's Education,* 1972, 61(9), 51-52. — 14

Lawrence, B., Weatherby, G., & Patterson, V. W. (Eds.) *The outputs of higher education: Their identification, measurement, and evaluation.* Boulder, Colorado: WICHE, 1970. — 6

Lessinger, L. M. *Every kid a winner: Accountability in education.* New York: Simon and Schuster, 1970a. — 1–2

Lessinger, L. M. Engineering accountability for results in public education. *Phi Delta Kappan,* 1970b, 52(4), 217-225. — 2

Lieberman, M. An overview of accountability. *Phi Delta Kappan,* 1970, 52(4), 194-195. — 1

Lopez, F. M. Accountability in education. *Phi Delta Kappan,* 1970, 52(4), 231-235. — 1, 2, 14, 26, 27

Mager, R. F. *Developing attitude toward learning.* Palo Alto, California: Fearon Publishers, 1968. — 16

Manning, C. W. Faculty activity analysis procedures manual. (Unedited draft, for preliminary review only.) Boulder, Colorado: National Center for Higher Education Management Systems at WICHE, 1973. — 19

Mayhew, L. B. Jottings. *Change* 1972, 4(2), 57-58. — 24

Miller, R. I. *Evaluating faculty performance.* San Francisco: Jossey-Bass, 1972. — 19–20, 21, 22

Mortimer, K. P. *Accountability in higher education.* American Association for Higher Education, 1972. — 2, 8

INDEXED REFERENCE LIST TO MATERIALS ON ACCOUNTABILITY IN HIGHER EDUCATION

REFERENCED TO PAGES IN THE REPORT

McKeachie, W. J. Research on student ratings of teaching. Paper presented at a conference of the Institute for Higher Education, Pittsburgh, December 1970. (ED 054724). — 21

Neff, C. B. Toward a definition of academic responsibility. *Journal of Higher Education,* 1969, 40, 12-22. — 2

Office of Instructional Development. *The evaluation and improvement of teaching.* Fort Collins, Colorado: Colorado State University, 1973. — 20

Office of the Educational Development Program *Educational Development at Michigan State University.* East Lansing: Author, No. 3, Spring, 1971. — 10–11

Peterson, R. E. *Toward institutional goal-consciousness.* Princeton, New Jersey: Educational Testing Service, 1971. — 6, 12

Peterson, R. E. *Goals for California higher education: A survey of 116 college communities.* Sacramento, California: Joint Committee on the Master Plan for Higher Education, California Legislature, 1973. — 3, 6, 12, 15

Pfeiffer, J. *New look at education.* Poughkeepsie, New York: Odyssey Press, 1968. — 13

Pfinster, A. O. The role of faculty in university governance. *Journal of Higher Education,* 1970, 41(6), 430-449. — 24

Rands, R. C. *Accountability.* Tigard, Oregon: Oregon Association for Higher Education, 1971. — 2, 8

Romney, L. C. *Faculty activity analysis: Overview and major issues.* Boulder, Colorado: National Center for Higher Education Management Systems at WICHE, 1971. — 14

Ronan, W. W. *Development of an instrument to evaluate classroom teaching effectiveness: Final report.* Atlanta: Georgia Institute of Technology, September 1971. (ED 056647). — 18, 22

Roueche, J. E., Baker, G. A., III, & Brownell, R. L. *Accountability and the community college.* Washington, D.C.: American Association of Junior Colleges, 1971. — 1, 24

Roueche, J. E. & Pitman, J. C. *A modest proposal: Students can learn.* San Francisco: Jossey-Bass, 1972. — 13

Scheid, P. N. Charter of accountability for executives. *Harvard Business Review,* 1965, 43, 88-98. — 14

Staff of the Higher Education Evaluation Program. *Higher education measurement and evaluation kit,* field edition. Los Angeles: Center for the Study of Evaluation, 1972. — 7

Stake, R. E. *The evaluation of college teaching: A position paper.* Urbana-Champaign: University of Illinois, revised January 1, 1971. (mimeo). — 8–9, 19

Stake, R. E. School accountability laws. *Evaluation Comment,* 1973, 4(1), 1-3. — 1

INDEXED REFERENCE LIST TO MATERIALS ON ACCOUNTABILITY IN HIGHER EDUCATION

REFERENCED TO PAGES IN THE REPORT

Status of Teaching *Comments.* Fort Collins, Colorado: Office of Public Communications, Colorado State University, 1973, 3(27), 1-2. — 20

Tollett, K. S. Higher education and the public sector. In Lawrence, et al. (Eds.) *The outputs of higher education: Their identification, measurement, and evaluation.* Boulder, Colorado: WICHE, 1970. — 6, 23

Trent, J. W. & Cohen, A. M. Research on teaching in higher education. In B. M. W. Travers (Ed.) *Second handbook of research on teaching.* Chicago: Rand McNally, 1973. — 7

Turner, R. L. Levels of criteria. In Rosner (Ed.) *The power of competency-based teacher evaluation: A report.* Boston: Allyn and Bacon, 1972. — 19

Turoff, M. Delphi and its potential impact on information systems. *Fall joint computer conference,* vol. 39. Montvale, New Jersey: American Federation of Information Processing Societies, 1971. — 12

Uhl, N. P. *Encouraging convergence of opinion, through the use of the Delphi technique, in the process of identifying an institution's goals.* Princeton, New Jersey: Educational Testing Service, 1971. — 12

Warrington, W. G. The MSU student instructional rating system (SIRS). Paper presented at the Symposium on Research, System Design and the Future of University Course Evaluations. Chicago: American Educational Research Association, April 1972. — 21

Wildavsky, A. A program of accountability for elementary schools. *Phi Delta Kappan,* 1970, 52(4), 212-216. — 1

Wilson, R. C., Dienst, E. R., & Watson, N. L. Characteristics of effective college teachers as perceived by their colleagues. *Journal of Educational Measurement,* 1973, 10(1), 31-37. — 21, 24–25

A BIBLIOGRAPHY

ON

INSTRUCTIONAL ACCOUNTABILITY

IN

HIGHER EDUCATION

Accountability in education and associated measurement problems. *Test Service Notebook 33.* New York: Harcourt, Brace, Jovanovich, 1972.

Alkin, M. C. Accountability defined. *Evaluation Comment,* 1972, 3(3), 1-5.

American Association of University Professors. Statement on government of colleges and universities. *American Association of University Professors Bulletin,* 1966, 52(4), 375-379.

Anderson, D. P. Clarifying and setting objectives on an intermediate school district's objectives utilizing the Delphi Technique. *Exploring the Potential of the Delphi Technique by Analyzing its Applications: an American Educational Research Association Symposium.* March 4, 1970.

Anderson, H. M. A study of certain criteria of teacher effectiveness. *Journal of Experimental Education,* 1954, 23, 41-71.

Armstrong, J. R. An educational process model for use in research. *Journal of Experimental Education,* 1970, 39(1), 2-7.

Arnold, J. E. Broad philosophical influences impinge on considerations of "full disclosure." *Higher Education Management,* 1972, 2(3).

Ashby, E. Second edition/the university ideal. *The Center Magazine,* 1973, 6(1), 37-41.

Astin, A. W. A re-examination of college productivity. *Journal Educational Psychology,* 1961, 52, 173-178.

Astin, A. W. & Lee, C. B. T. Current practices in the evaluation and training of college teachers. *Educational Record,* 1966, 47, 361-375.

Astin, A. W. *The college environment.* Washington, D. C.: American Council on Education, 1968.

Attwood, L. E. & Starck, K. Faculty attitudes toward university role and governance: A factor analytic approach. *The Journal of Experimental Education,* 1970, 39(2), 1-9.

Audiovisual Instruction, 1971, 16(5).

Bain, H. Self-governance must come first, then accountability. *Phi Delta Kappan,* 1970, 51, 413.

Balderston, F. E. Thinking about the outputs of higher education. In Lawrence, et al. (Eds.), *The outputs of higher education: Their identification, measurement, and evaluation.* Boulder, Colorado: WICHE, 1970, 11-16.

Baldridge, J. V. (Ed.) *Academic governance.* Berkeley: McCutchan Publishing Company, 1971.

Barro, S. M. An approach to developing accountability measures for the public schools. *Phi Delta Kappan,* 1970, 52(4), 196-205.

Barson, J. *A procedural and cost analysis study of media in instructional systems development,* 1965. Grant No. OE-3-16-030, U. S. Department of HEW, U.S.O.E., Bureau of Research.

Beach, M. Promoting good teaching in the microversity. *Journal of Higher Education,* 37(6), 1966, 301-306.

Bell, T. H. The means and ends of accountability. *Proceedings of the conferences on educational accountability.* Washington, D.C. and Hollywood, California, March 1971.

Bhaerman, R. D. Accountability: The great day of judgment. *Educational Technology*, 1971, 11(1), 62-63.

Bolman, F. D. University reform and institutional research. *Journal of Higher Education*, 1970, 41(2), 85-97.

Bonthius, R. H., Davis, F. J. & Druschal, J. G. *The independent study program in the United States.* New York: Columbia University Press, 1957.

Botstein, L. Reviews. *Change*, 1972, 4(8), 55-60.

Brandl, J. E. Public service outputs of higher education: An exploratory essay. In Lawrence, et al. (Eds.), *The outputs of higher education: Their identification, measurement, and evaluation.* Boulder, Colorado: WICHE, 1970, 85-91.

Brown, D. G. A scheme for measuring the output of higher education. In Lawrence, et al (Eds.), *The outputs of higher education: Their identification, measurement and evaluation.* Boulder, Colorado: WICHE, 1970, 26-38.

Brubacher, J. S. *Bases for policy in higher education.* New York: McGraw-Hill, 1965.

Bruno, J. E. A methodology for the evaluation of instruction or performance contracts which incorporates school district utilities and goals. *American Educational Research Journal*, 1972, 9, 2.

Caldwell, M. *Input evaluation and educational planning.* Columbus, Ohio: Evaluation Center, Ohio State University College of Education, January, 1968, 20.

Callahan, R. E. *Education and the cult of efficiency.* Chicago: The University of Chicago Press, 1962.

Campbell, R. E. Accountability and stone soup. *Phi Delta Kappan*, 1971, 176-178.

Capretta, P. J. The students on his own power. *Improving college and university teaching*, Autumn, 1966, 252-254.

Carl, L. M., Thomas, G. P., Smith, C. A., Morse, K. R., & Clukey, D. (Eds.) *The Oregon Studies*, Vol. 5, Monmouth, Oregon: Teaching Research, 1972.

Carolson, O. *Adoption of educational innovations.* Eugene, Oregon: Center for the Advanced Study of Educational Administration, 1965.

Carnegie Commission on Higher Education. *Capital and campus: State Responsibility for post/secondary education.* New York: McGraw-Hill, 1971.

Casasco, J. A. *Planning techniques for university management.* Washington, D.C.: American Council on Education, 1970.

Center for Instructional Research and Curriculum Evaluation. *The accountability notebook.* Springfield, Illinois: Office of the Superintendent of Public Instruction, 1971.

Centra, J. A. & Linn, R. L. *On the interpretation of student perceptions of their college environment.* Princeton, New Jersey: Educational Testing Service, August, 1968.

Clark, D. G. & Huff, R. A. *Instructional program budgeting in higher education.* Boulder, Colorado: National Center for Higher Education Management Systems. WICHE, 1972.

Cook, D. R. A systems approach to accountability and management by objectives. *Focus on Guidance.* 1972, 4(10), 1-10.

Costin, F., Greenough, W. T. & Menges, R. H. Student ratings of college teaching: Reliability, validity, and usefulness. *Review of Educational Research*, 1971, 41(5), 511-535.

Cox, R. C. Evaluative aspects of criterion-referenced measures. Paper presented at the American Educational Research Association Symposium. "Criterion-referenced measurement: Emerging Issues," Minneapolis, Minnesota, March, 1970.

Cyphert, F. R. & Gant, W. L. The Delphi Technique: A case study. *Phi Delta Kappan*, January, 1971, 272-273.

Cyrs, T. E. & Lowenthal, R. A. A model for curriculum design using a systems approach. *Audiovisual Instruction*, 1970, 15(1), 16-18.

Dahnke, H. L., Jones, D. P., Mason, T. R. & Romney, L. C. *Higher education facilities planning and management manuals.* Boulder, Colorado: WICHE, 1971.

Dalkey, N. C. & Rourke, D. L.*Experimental assessment of Delphi procedures with group value judgments.* Santa Monica, California: Rand Corp, 1971.

Darland, D. D. The profession's quest for responsibility and accountability. *Phi Delta Kappan*, 1970, 52, 41-44.

Davies, D. The relevance of accountability. *Journal of Teacher Education*, 1970, 21, 133.

Deterline, W. A. Applied accountability. *Educational Technology*, 1971, 11(1), 15-20.

Dick, R. D. Personalized Teaching. *Improving college and university teaching*, 1966, 9(4), 239-242.

Dietrich, J. E. & Johnson, C. A catalytic agent for innovation in higher education. *Educational Record*, American Council on Education, Summer, 1967.

Domyskn, R. A. Annotated bibliography on accountability. *Audiovisual Instruction*, 1971, 16(5), 93-101.

Doty, B. A. Teaching method effectiveness in relation to certain student characteristics. *Journal of Educational Research*, 1967, 60, 363-365.

Douglass, L. G. Measures of teacher evaluation as related to student achievement. Unpublished master's thesis, University of Tennessee, 1968.

Downey, L. W., Seager, R. C. & Slagle, A. T. *The T.P.E. opionnaire: An instrument for obtaining opinions regarding the task of public education.* Chicago: Midwest Administration Center, University of Chicago, 1958.

Dressel, P. L. *College and university curriculum.* Berkeley: McCutchan Publishing Company, 1963.

Dressel, P. L. *The undergraduate curriculum in higher education.* Washington, D.C.: The Center for Applied Research in Education, 1963.

Dressel, P. L. The meaning of a college education. *Journal of Higher Education*, 1968, 39(9), 481-489.

Dressel, P. L. *Impact of federal support of science on the publicly supported universities and four-year colleges in Michigan.* NSF Contract No. NSF-C-506, March, 1969.

Dressel, P. L. & associates. *Institutional research in the university.* San Francisco: Jossey-Bass, 1971

Dressel, P. L. & Richard, D. J. The university department: Retrospect and prospect. *Journal of Higher Education*, 1970, 41(5), 387-402.

Drummond, W. H. The meaning and application of performance criteria in staff development. *Phi Delta Kappan,* 1970, 52(1), 32-35.

Durstiene, R. M. An accountability information system. *Phi Delta Kappan,* 1972, 52(4), 236-239.

Dyer, H. S. How precise can measurement be? In H. F. Spaulding (Ed.) *Evaluation and Christian education.* New York: National Council of Churches, 1960.

Dyer, H. S. Toward objective criteria of professional accountability in the schools of New York. *Phi Delta Kappan,* 1970, 52(4), 206-211.

Eble, K. E. *The profane comedy.* New York: Macmillan, 1962.

Eble, K. E. *The recognition and evaluation of teaching.* Project to improve college teaching, Salt Lake City, Utah, November, 1970. (ERIC No. ED 046350).

Eble, K. E. *The recognition and evaluation of teaching.* Washington, D. C.: American Association of University Professors, 1971.

Educational Technology, 1971, 11(1).

Elbow, P. H. More accurate evaluation of student performance. *Journal of Higher Education,* 1969, 40(3), 219-230.

Enthovan, A. C. Measures of the outputs of higher education: Some practical suggestions for their development and use. In P. Lawrence, et al. (Eds.), *The outputs of higher education: Their identification, measurement and evaluation.* Boulder, Colorado: WICHE, 1970, 51-58.

Erickson, R. I. Programmed learning and personality styles at the college level. *Journal of Educational Research,* 1967, 60, 330-333.

Estrim, H. A. & Goode, D. M. (Eds.) *College and university teaching.* Dubuque, Iowa: W. C. Brown Company, 1964.

Evans, R. I. & Leppmann, P. K. *Resistance to innovation in higher education: A social psychological exploration focused on television and the establishment.* San Francisco: Jossey-Bass, Inc., 1967.

Fahey, G. Student ratings of teachers: Some questionable assumptions. A paper presented at a conference of the Institute for Higher Education, Pittsburgh, December, 1970.

Feldman, A. & Newcombe, T. M. *The impact of college on students.* San Francisco: Jossey-Bass, Inc., 1969. 2 volumes.

Fishburne, B. Classrooms without teachers. *Improving college and university teaching,* 1966, 233-234.

Forrester, J. W. Counter intuitive behavior of social systems. *Technology Review,* 1971, 73(3).

Freedman, M. B. *The college experience.* San Francisco: Jossey-Bass, Inc. 1967.

Frenkel, C. S. *Issues in university education.* New York: Harper, 1959.

Gage, G. E. Distribution of evaluation information. In C. F. Paulson (Ed.), *A strategy for evaluation design.* Monmouth, Oregon: Teaching Research, 1970.

Gage, G. E. A model for establishing a priority of educational needs. Paper presented at the annual meeting of the National Council on Measurement in Education, March, 1970.

Gage, G. E. Accountability in the American college. Unpublished manuscript, Monmouth, Oregon: Teaching Research, 1971.

Gage, N. L. Paradigms for research on teaching. In N. L. Gage (Ed.), *Handbook of research on teaching.* Chicago: Rand McNally, 1963.

Garrison, R. H. What's the message? *Improving college and university teaching,* Spring, 1965, 91-93.

Gibson, R. C. Block grants for higher education. *Phi Delta Kappan,* 1972, 54(2), 118-119.

Glass, G. V The many faces of "educational accountability". *Phi Delta Kappan,* 1972, 50(10), 636-639.

Glass, G. V On reading Stake. *Evaluation Comment,* 1973, 4(1), 3.

Glenny, L. A. *The anonymous leaders of higher education.* Speech delivered to the Association of Institutional Research, Denver, May, 1971.

Glenny, L. A. Berdahl, R. O., Palola, E. G. & Paltridge, J. G. *Coordinating higher education for the '70's.* Berkeley: Center for Research and Development in Higher Education, 1971.

Goldberg, M. H. New college teacher and his professional self-image. *Educational Forum,* 1965, 29, 451-459.

Grass, C. H. (Ed.) *College teachers look at college teaching.* Washington, D. C.: The American Association of Colleges for Teacher Education, 1965.

Grey, C. E. The teaching model and evaluation of teaching. *Journal of Higher Education,* 1969, 40(8), 636-642.

Gross, E. Universities as organizations: A study of goals. In J. V. Baldridge (Ed.), *Academic Governance.* Berkeley: McCutchan Publishing Company, 1971.

Gustad, J. W. *Policies and practices in faculty evaluation.* Washington, D. C.: American Council on Evaluation, 1961.

Hacquart, A. *The recruitment and training of university teachers.* Ghert, Belguim: International Association of University Professors and Lecturers for UNESCO, 1967.

Hammond, P. E., Meyer, J. W. & Miller, D. Teaching versus research: Sources of misperceptions. *The Journal of Higher Education,* 1969, 40, 682-690.

Harmon, P. Curriculum cost-effectiveness evaluation. *Audiovisual Instruction,* 1970, 15(1), 24-26, 76-77.

Harris, S. E. *The economics of Harvard.* New York: McGraw-Hill, 1970.

Hartley, E. L. & Hogan, T. T. Some additional factors in student evaluation of courses. *American Educational Research Journal,* 1972, 9(2), 241-250.

Hartnett, R. J. Evaluation, accountability, and a consideration of some of the problems of assessing college impacts. Unpublished manuscript, Educational Testing Service, Princeton, New Jersey, 1971.

Hartnett, R. J. *Accountability in higher education: A consideration of some of the problems of assessing college impacts.* Princeton: College Entrance Examination Board, 1971.

Hatch, W. R. What standards do we raise? *New Dimensions in Higher Education,* (HEW Bulletin No. 12) Washington, D.C.: United States Government Printing Office, 1963.

Hearn, N. E. The where, when and how of trying innovation. *Phi Delta Kappan,* 1972, 53(6), 358-361, 374.

Heclinger, F. M. Accountability: A way to measure the job done by schools. *The New York Times,* February 14, 1971, 7.

Hefferlin, J.B.L. *Dynamics of academic reform.* San Francisco: Jossey-Bass, 1969.

Hefferlin, J.B.L. & Phillips, E.L., Jr. *Information services for academic administration.* San Francisco: Jossey-Bass, 1971.

Henderson, A. D. Control in higher education: Trends and issues. *Journal of Higher Education,* 1969, 40(1), 1-11.

Hildebrand, M., Wilson, R. C. & Dienst, E. R. *Evaluating university teaching.* Berkeley: Center for Research and Development in Higher Education, 1971. (ERIC No. ED 057748)

Hind, R. R. Analysis of a faculty: Professionalism evaluation, and the authority structure. In J. V. Baldridge (Ed.) *Academic Governance.* Berkeley: McCutchan Publishing Company, 1971.

Hitch, C. Plans are presented for maintaining integrity of the university and its academic programs. *University Bulletin,* 1970, 19, 5-10.

Hodgkinson, H. L. *Campus governance: The amazing thing is that it works at all.* Washington, D. C.: ERIC Clearinghouse on Higher Education, 1971. (ED 051 439).

Hodgkinson, H. L. & Edelstein, S. Questionnaires: In fact there is error. *Educational Researcher,* 1972, 1(8), 9-10.

Holmes, D. Evaluating teacher effectiveness. In F. F. Harcleroad, & J. Cronell (Eds.), *Assessment of colleges and universities.* Iowa City: The American College Testing Program, 1971, 35-40.

Holmes, D. S. The teaching assessment blank: A form for the student assessment of college instructors. *Journal of Experimental Education,* 1971, 39(3), 34-38.

Honey, J. C. Will the faculty survive. *Change*, 1972, 4(5), 24-29.

Hopkins, D. S. P. On the use of large-scale simulation models for university planning. *Review of Educational Research,* 1971, 41(5), 467-478.

Hough, R. R. The outputs of undergraduate education. In B. Lawrence, et al. (Eds.), *The outputs of higher education: Their identification, measurement, and evaluation.* Boulder, Colorado: WICHE, 1970, 93-103.

Howe, R. A. Roles of faculty. In H. L. Hodgkinson and R. L. Meeth (Eds.), *Power and authority,* San Francisco: Jossey-Bass, 1971, 126-138.

Huckfeldt, V. E. *A forecast of changes in postsecondary education.* Boulder, Colorado: NCHEMS-WICHE, 1972.

Huff, R. A. *Definition and measurement of the outcomes and activities of higher education.* Boulder, Colorado: WICHE, 1971.

Huff, R. A. & Manning, C. W. *Higher education planning and management systems: A brief explanation.* Boulder, Colorado: WICHE, 1972.

Hyer, A. L. From gold stars to green stamps. *Audiovisual Instruction,* 1971, 16(5), 4-8.

Institutional Research Program for Higher Education, *Institutional Goals Inventory.* Princeton, New Jersey: Educational Testing Service, 1972.

Jones, R. D. The prediction of teaching efficiency. *Journal of Experimental Education,* 1046, 12, 85-99.

Justiz, T. B. A reliable measure of teacher effectiveness. *Educational Leadership: Research supplement,* 1969, 3(1), 49-55.

Karo, F. G. Approaches to evaluating research: A review. *Human organization,* 1969, 28(2), 87-99.

Katz, J. *No time for youth.* San Francisco: Jossey-Bass, 1968.

Katz, J. & Stanford, N. The curriculum in the perspective of the theory of personality development. In N. Sanford (Ed.), *The American College,* New York: John Wiley and Sons, 1962.

Kaufman, R. A. Accountability: A system approach and the quantitative improvement of education--an attempted integration. *Educational Technology,* 1971, ii 21-26.

Kaufman, R. A. *Educational System Planning.* Englewood Cliffs, New Jersey: Prentice-Hall, 1972.

Keeton, M. The disenfranchised on campus. *Journal of Higher Education,* 1970, 41(6), 421-429.

Keck, D. College governance and collective bargaining. *Today's Education,* 1972, 61(9), 51-52.

Klein, S. P. Evaluating tests in terms of the information they provide. *Evaluation Comment,* 1970, 2(2), 1-6.

Klein, S. P. The uses and limitations of standardized tests in meeting the demands for accountability. *Evaluation Comment,* 1971, 2(4), 1-7.

Klein, S. P. & Alkin, M. C. Evaluating teachers for outcome accountability. *Evaluation Comment,* 1972, 3(3), 5-11.

Koening, H. E., Keeney, M. G. & Zemach, R. *A systems model for management, planning and resource allocation in institutions of higher education.* East Lansing, Michigan: Michigan State University, 1968.

Lang, M. Student apathy. *Improving college and university teaching.* Winter, 1967, 33-37.

Lasmanis, J. E. & Gorman, M. M. PMIS: Planning and management information system. *Phi Delta Kappan,* 1972, 50(8), 520, 523.

Lawrence, B., Weathersby, G. & Patterson, V. W. (Eds.). *The outputs of higher education: Their identification, measurement and evaluation.* Boulder, Colorado: WICHE, 1970.

Lawrence, B. The national center for higher education management system at WICHE: Its nature and scope. Paper presented at the Evaluation Conference and Institutional Management in Higher Education at the Centre for Educational Research and Innovation, Paris: November, 1971.

Lee, C. B. T. (Ed.). *Improving college teaching.* Washington, D. C.: American Council on Education, 1967.

Lessinger, L. M. Accountability and curriculum reform. *Educational Technology,* 1970, 10, 56-57.

Lessinger, L. M. *Every kid a winner: Accountability in education.* New York: Simon & Schuster, 1970.

Lessinger, L. M. Engineering accountability for results in public schools. *Phi Delta Kappan,* 1970, 52(4), 217-225.

Lessinger, L. M. The powerful notion of accountability. *Journal of Secondary Education,* 1970, 45, 339-347.

Lessinger, L. M. Robbing Dr. Peter to "pay Paul": Accounting for our stewardship of public education. *Educational Technology,* 1971, 11(1), 11-14.

Lieberman, M. An overview of accountability. *Phi Delta Kappan,* 1970, 52(4), 194-195.

Liemmann, W. H. "Mini-colleges" in a commuter institution. *Journal of Higher Education.* 1968, 39, 218-221.

Lindman, E. Net-shift analysis for comparing distributions of test scores. Working paper No. 5, UCLA: Center for the Study of Evaluation, 1968.

Livingstove, J. A. Educational goals and program planning budgeting system. *Journal of Secondary Education,* 1970, 45, 305-312.

Lopez, F. M. Accountabilty in education. *Phi Delta Kappan,* 1970, 52(4), 231-235.

Lucas, J. A. Learning efficiency of students in varying environments. *Journal of Experimental Education,* 1970, 39(1), 63-68.

Lumsdaine, A. A. Educational technology, programmed learning and instructional science. In E. R. Hilgard (Ed.), *Theories of Learning and Instruction,* 3rd yearbook of the National Society for the Study of Education, 1964, (Part 1).

MacDonald, J. B. Educational models for instruction-introduction. *Theories of instruction.* Washington, D. C.: Association for Supervision and Curriculum Development, 1965.

Mager, R. F. *Developing attitude toward learning.* Palo Alto, California: Fearon Publishers, 1968.

Mager, R. F. & Pipe, P. *Analyzing performance problems.* Belmont, California: Fearon Publishers, 1970.

Martin, W. B. College survival research. *Educational Researcher,* 1972, 1(2), 12-13.

Mayhew, L. B. Jottings. *Change,* 1972, 4(2), 57-58.

McConnell, T. R. Faculty interests in value change and power conflicts. *American Association of University Professors Bulletin,* 1969, 55, 342-352.

McConnell, T. R. Accountability and autonomy. *Journal of Higher Education,* 1971, 42, 448-463.

McConnell, T. R. Faculty government. In H. Hodgkinson & L. B. Meeth (Eds.), *Power and Authority,* San Francisco: Jossey-Bass, 1971.

McConnell, T. R. Can colleges change student values? *Change.* 1972, 4(9), 63-64.

McConnell, T. R. & Mortimer, K. P. *The faculty in university government* Berkeley: Center for Research and Development in Higher Education, 1971.

McCune, G. H. Contributions general education can make to the education of more heterogeneous groups. *Current issues in higher education,* 1963, 253-257.

McGhan, B. R. Accountability as a negative reinforcer. *American Teacher,* 1970, 55(3), 13.

McGrath, E. J. *Should students share the power?* Philadelphia: Temple University Press, 1970.

McKeachie, W. J. What do the research findings from behavioral sciences suggest concerning the improvement of teaching and learning? *Current Issues in Higher Education.* Association for Higher Education, 1960, 128-131.

McKeachie, W. J. Procedures & techniques of teaching: A survey of experimental studies. In N. Sanford (Ed.), *The American College.* New York: John Wiley & Sons, 1962.

McKeachie, W. J., Isaacson, R. L. & Milholland, J. E. *Research on the characteristics of effective college teaching.* Ann Arbor: The University of Michigan, 1964.

McKeachie, W. J. Research on student ratings of teaching. Paper presented at the conference of the Institute for Higher Education, Pittsburgh, December, 1970. (ERIC No. Ed 054 724).

McKencline, W. J. Research on teaching on the college and university level. In N. L. Gage (Ed.), *Handbook of research on teaching.* Chicago: Rand McNally, 1963.

McMurrin, S. M. Academic freedom. In R. L. Ebel (Ed.), *Encyclopedia of educational research.* London: Macmillan Company, 1969.

McNeil, J. D. & Popham, W. J. The assessment of teacher competence. In R. M. W. Travers (Ed.), *Second handbook of research on teaching.* Chicago: Rand McNally, 1973.

Meshke, E. *Analysis of college classroom teaching and a form for recording evidence of quality.* Minneapolis: Burgess Publishing, 1959.

Miller, G. W. *Success, failure and wastage in higher education: An overview of the problem derived from research and theory.* George G. Harrop and Co., 1970.

Miller, J. G. Living systems: The organization. *Behavioral Science,* 1972. 17(1), 173-175.

Miller, R. I. *Evaluating faculty performance.* San Francisco: Jossey-Bass, 1972.

Milton, O. & Shoben, E. H., Jr. *Learning and the professors.* Athens, Ohio: Ohio University Press, 1968.

Minter, J. W. (Ed.) *Campus and capitol.* Boulder, Colorado: WICHE, 1966.

Moran, W. E. The study of university organizations. *Journal of Higher Education,* 1968, 39(3), 144-151.

Morris, W. H. (Ed.) *Effective college teaching: The quest for relevance.* Washington, D.C.: American Council on Education, 1970.

Mortimer, K. P. *Accountability in higher education.* Washington, D.C.: American Association for Higher Education, 1972.

Morton, R. K. Students' view of teaching. *Improving college and university teaching,* Summer, 1965, 140-142.

National Science Foundation, *Systems for measuring and reporting the resources and activities of colleges and universities.* Washington, D.C.: Government Printing Office, 1967.

Neff, C. B. Toward a definition of academic responsibility. *Journal of Higher Education,* 1969, 40, 12-22.

Nelson, F. G. *Models for evaluation: An introduction.* Monmouth, Oregon: Teaching Research, 1970.

Newcombs, T. M. & Wilson, E. K. (Eds.) *College peer groups.* Chicago: Aldine Publishing, 1966.

O'Brien, J. C. The professor stands trial. *The Educational Forum,* 1969, 34, (1), 39-45.

O'Down, D. D. & Beardslee, D. C. The image of the college professor. *American Association of University Professors Bulletin,* 1961, 47, 216-221.

Office of the Educational Development Program. *Educational Development at Michigan State University.* East Lansing: Author, No. 3, Spring, 1971.

Parker, G. G. Statistics of attendance in American universities and colleges. *School and Society,* 1971, 99, 107-108.

Peterson, R. E. *Toward institutional goal-consciousness.* Princeton, New Jersey: Educational Testing Service, 1971.

Peterson, R. E. *The institutional goals inventory.* Princeton, New Jersey: Educational Testing Service, 1972.

Peterson, R. E. *Goals for California higher education: A survey of 116 college communities.* Sacramento, California: Joint Committee on the Master Plan for Higher Education, California Legislature, 1973.

Pfeiffer, J. *New Look at education.* Poughkeepsie, New York: Odyssey Press, 1968.

Phi Delta Kappan, 1970, 52(4). Eighteen articles on accountability.

Popham, W. J. Performance tests of teaching proficiency: Rationale, development and validation. *American Educational Research Journal,* 1971, 8, 105-117.

Provus, M. *Discrepancy evaluation for educational programs: Improvement and assessment.* Berkeley: McCutchan Publishing Company, 1971.

Pullias, E. V., Lockhard, A., Bond, M. H., Clifton, M. & Miller, D. M. *Toward excellence in college teaching.* Dubuque, Iowa: W. C. Brown, 1963.

Quick, A. F. & Wolfe, A. D. The ideal professor. *Improving College and University Teaching,* Summer, 1965, 133-134.

Randall, R. S. An operational application of the CIPP models for evaluation. *Educational Technology,* July, 1969, 40-44.

Rands, R. C. *Accountability.* Tigard, Oregon: Oregon Association for Higher Education, 1971.

Rayder, N. F. College students ratings of instructors. *Journal of Experimental Education,* 1968, 37(2), 76-81.

Remmers, H. H. Student opinion of teachers efficiency as a function of rank in class. *School and Society,* 1968, 28, 759-760.

Riley, J. W., Jr., Ryan, B. F. & Lipshiz, M. *The student looks at his teacher.* New Brunswick, New Jersey: Rutgers University Press, 1950.

Roberson, E. W. *Educational accountability through evaluation.* Englewood Cliffs, New Jersey: Educational Technology Publications, 1971.

Robinson, D. W. Accountability for whom? For what? *Phi Delta Kappan,* 1970, 2(4), 193.

Ronan, W. W. *Development of an instrument to evaluate college classroom teaching effectiveness: Final report.* Atlanta, Georgia: Institute of Technology, September, 1971. (ERIC No. ED 056 647)

Rosenbloom, P. C. (Ed.) The Minnesota national laboratory. *Modern viewpoint in the curriculum.* New York: McGraw-Hill, 1964.

Rosenshine, B. & McGaw, B. Issues in assessing teacher accountability in public education. *Phi Delta Kappan,* 1972, 50(10), 640-643.

Roucek, J. S. (Ed.) *Programmed learning.* New York: Philosophical Library, 1965.

Roueche, J. E. Improved instruction in the junior college: Key to equal opportunity. *Journal of Higher Education,* 1970, 41(9), 713-722.

Roueche, J. E., Baker, G. A., III, & Brownell, R. L. *Accountability and the community college.* Washington, D.C.: American Association of Junior Colleges, 1971.

Roueche, J. E. & Pitman, J. L. *A modest proposal: Students can learn.* San Francisco: Jossey-Bass, 1972.

Runchel, P., Harrison, R. & Rumbel, M. *The changing college classroom.* San Francisco: Jossey-Bass, 1969.

Sanford, N. Higher education as a social problem. *The American college.* New York: John Wiley, 1962.

Sanford, N. Higher education as a field of study. In Sanford (Ed.) *The American college.* New York: Wiley and Sons, 1962.

Scheid, P. N. Charter of accountability for executives. *Harvard Business Review,* 43, 1965, 88-98.

Schoen, W. T., Jr. Clarification and delineation of areas of student and faculty responsibility. *The Journal of College Student Personnel,* June, 1965.

Sciara, F. J. & Jantz, R. K. *Accountability in American education.* Boston: Allyn and Bacon, Inc., 1972.

Shoben, E. J. (Ed.) *Problems and issues in contemporary education.* Chicago: Scott, Foresman, and Company, 1966.

Shuford, E. H. & Massengill, H. E. The relative effectiveness of five instructional strategies. Paper presented for meeting of the National Society for Programmed Instruction, Lexington, Massachusetts, 1967.

Sieber, S. E. & Lazarsfeld, P. F. *Reforming the university: The role of the research center.* Washington, D.C.: HEW, 1971. (ED 047 170)

Siegel, L. The contributions and implications of recent research related to improving teaching and learning. In O. Milton and E. Shoben, Jr. (Eds.), *Learning and the Professors.* Athens, Ohio: Ohio University Press, 1968.

Smart, J. M. & Spaulding, W. B. Concepts of system in higher education. *Educational Forum,* 1970, 34(2), 167-175.

Staff of the Higher Education Evaluation Program. *Higher education measurement and evaluation kit,* field edition. Los Angeles: Center for the Study of Evaluation, 1972.

Stake, R. E. The countenance of educational evaluation. *Teachers College Record,* 1967, 68, 523-540.

Stake, R. E. Objectives, priorities, and other judgment data. *Review of Educational Research,* 1970, 40, 181-212.

Stake, R. E. *The evaluation of college teaching: A position paper.* Urbana-Champaign: University of Illinois, revised Janaury 1, 1971. (mimeographed)

Stake, R. E. School accountability laws. *Evaluation Comment,* 1973, 4(1), 1-3.

Stern, G. Characteristics of the intellectual climate in college environments *Harvard Educational Review,* Winter, 1963, 5-41.

Stiles, L. J. Interdisciplinary accountability for teacher education. *Journal of Higher Education,* 1968, 39(1), 23-31.

Stone, J. C. *Breakthrough in teacher education.* San Francisco: Jossey-Bass, 1968.

Strucker, W. H. (Ed.) Experimental colleges: Their role in American higher education. Tallahassee: Florida State University, 1964.

Stufflebeam, D. L. Toward a science of educational evaluation. *Educational Technology,* 1968, 8, 5-12.

Suinn, R. M. Applying learning principles in teaching. *Improving College and University Teaching,* Autumn, 1965, 230-233.

Taylor, H. *Students without teachers.* New York: McGraw-Hill, 1969.

Thronton, J. W., Jr. & Brown, J. W. *New media and college teaching.* Washington, D.C.: National Education Association, 1968.

Tollett, K. S. Higher education and the public sector. In B. Lawrence, et al. (Eds.) *The outputs of higher education: Their identification, measurement and evalaution.* Boulder, Colorado: WICHE, 1970, 61-72.

Toote, C. & Mayer, H. *The culture of the university: Governance and education.* San Francisco: Jossey-Bass, 1968.

Trenaman, J. M. *Communications and comprehension.* New York: Humanities Press, 1967.

Trent, J. W. & Cohen, A. M. Research on teaching in higher education. In R. M. W. Travers (Ed.) *Second handbook of research on teaching.* Chicago: Rand McNally, 1973.

Trow, W. C. *Teacher and technology.* New York: Applegate-Century Crafts, 1965.

Turner, R. L. Levels of criteria. In B. Rosner (Ed.) *The power of competency-based teacher education: A report.* Boston: Allyn and Bacon, Inc., 1972.

Turoff, M. Delphi and its potential impact on information systems. *Fall joint computer conference.* Montvale, New Jersey: American Federation of Information Processing Societies, 1971.

Tyreell, P. H. Notes on experimental projects and institutional research. *Journal of Higher Education,* 1969, 40(6), 443-450.

Uhl, N. P. *Encouraging convergence of opinion, through the use of the Delphi technique, in the process of identifying an institution's goals.* Princeton, New Jersey: Educational Testing Service, 1971.

Van Gigch, J. & Hill, R. C. *Using systems analysis to implement cost-effectiveness and program budgeting in education.* Englewood Cliffs, New Jersey: Educational Technology Publications, 1971.

Warfield, J. W. Teaching teachers TV teamwork. *Improving College and University Teaching,* 1965, 8(1), 97-99.

Warrington, W. G. The MSU student instructional rating system (SIRS). Paper presented at the Research, System Design, and the Future of University Course Evaluation symposium of the American Educational Research Association, Chicago, April, 1972.

Welson, E. K. Effecting change in the college student: Who teaches what? *Antioch College Reports,* March, 1963, No. 4.

Whitlock, G. H. Criteria of teaching effectiveness and problems of measurement. In O. Milton (Ed.), *A conference on improving arrangements for learning in Tennessee colleges and universities.* Knoxville: The University of Tennessee, 1964.

Wildavsky, A. A program of accountability for elementary schools. *Phi Delta Kappan,* 1970, 52(4), 212-216.

Wilson, R. C., Dienst, E. R. & Watson, N. L. Characteristics of effective college teachers as perceived by their colleagues. *Journal of Educational Measurement,* 1973, 10(1), 31-37.